

ELECTRICITY MARKETS: LESSONS LEARNED FROM CALIFORNIA

HEARING BEFORE THE SUBCOMMITTEE ON ENERGY AND AIR QUALITY OF THE COMMITTEE ON ENERGY AND COMMERCE HOUSE OF REPRESENTATIVES ONE HUNDRED SEVENTH CONGRESS

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ELECTRICITY MARKETS: LESSONS LEARNED FROM CALIFORNIA

THURSDAY, FEBRUARY 15, 2001

HOUSE OF REPRESENTATIVES,
COMMITTEE ON ENERGY AND COMMERCE,
SUBCOMMITTEE ON ENERGY AND AIR QUALITY,
Washington, DC.

The subcommittee met, pursuant to notice, at 10 a.m., in room 2322, Rayburn House Office Building, Hon. Joe Barton (chairman) presiding.

Members present: Representatives Barton, Cox, Largent, Whitfield, Ganske, Shimkus, Pickering, Blunt, Bryant, Radanovich, Walden, Terry, Boucher, Sawyer, Wynn, Doyle, John, Waxman, Markey, Gordon, Barrett, and Luther.

Also present: Representative Green.

Staff present: Jason Bentley, majority counsel; Miriam Erickson, majority counsel; Bob Meyers, majority counsel; Joe Stanko, majority counsel; Andy Black, policy coordinator; Karine Alemian, professional staff; Peter Kieky, legislative clerk; Sue Sheridan, minority counsel; Alison Taylor, minority counsel, and Rick Kessler, minority counsel.

Mr. BARTON. The subcommittee will come to order. It is my practice, as subcommittee chairman, to do everything possible to start on time, and it is 10. I am gratified that we have a number of members here. I will not be calling any votes, since obviously I would be outvoted if I were to do so, but we are delighted to welcome the Subcommittee of Energy and Air Quality members and our audience and our witnesses to our first hearing of the 107th Congress.

I am honored and privileged to be the chairman. I would like to welcome apparently in absentia the new members of the subcommittee. We have Congressman Chris Cox, Congressman Greg Ganske, Congressman Roy Blunt, Congressman George Radanovich, Mary Bono, Gary Walden and Lee Terry on the Republican side that are new to the subcommittee. On the Democrat side, we have Congressman Tom Barrett and Bill Luther, who have been on the full committee but not on this subcommittee. We also have both new and full subcommittee members Michael Doyle and Chris John. Let the record show that Congressman Doyle is actually here in person, and we do appreciate that.

To all members, I want to say that I look forward to working with you as we work in this Congress to craft an energy policy that is good for the country, and also an environmental policy to the subject that is within our jurisdiction that is good for the country.

We are going to be very busy. Energy policy is at the forefront of the minds of the American people. All we have to do is look at the various energy markets.

Last summer, with oil prices very tight, prices for oil, gasoline and other petroleum products became unacceptably high. Supplies of home heating oil were low. Prices for home heating oil in the Northeast were very high. In my part of the country, the supply for natural gas has not kept up with the demand for that product and natural gas prices have been unacceptably high.

The number of refineries in this country continues to dwindle, and their capacity has become even further constrained. Our transportation and distribution outlets for energy have not increased to meet the demands for this country and, of course, as we are going to learn more about today in our State with the largest population, the great State of California, their demand for electricity has outstripped their supply for electricity in that market, and we are going to hear more about what has been the consequences of that.

In this Congress, the subcommittee intends to focus on the balance of supply and demand in energy. We also want to take an inventory of our Nation's energy capabilities and the obstacles that we face in order to get a better supply/demand balance. Our comprehensive review will be of each of the different fuel sources, and of also the various differences between the regions of our great Nation. We intend to work closely with other committees in the House and the Senate and with the new President and Vice President and his cabinet and the executive branch.

Today we are going to begin a series of hearings dealing with our electricity markets. We want to focus on the experiences of several States which have restructured their electricity markets in the last several years. On the West Coast, the great State of California which passed its bill in 1996; on the East Coast, the great State of Pennsylvania, which also passed its bill in 1996; and finally in the central part of the country, the great State of Ohio, which restructured in 1999.

In total, 25 States have passed restructuring legislation to implement some—or implemented a regulatory restructuring effort in their electricity markets. This subcommittee intends to find out what the differences are between each of the State's plans and what are the similarities, what has a State has done right, what has a State done wrong? What should other States know that haven't acted yet, and what should Federal legislatures know about our regional markets?

This subcommittee reported legislation during the last Congress dealing with both retail and wholesale markets and would do well to learn from the lessons that the States have learned as they have restructured their markets.

Later this year, this subcommittee will review specific parts of the electricity industry and the proper role of Congress and the Federal Government in improving supply, generation to capacity of operation of interstate transmission in making States more successful should they choose a retail restructuring opportunity.

So today, as we look at these three specific States, we hope that we will learn lessons that we may be able to apply in the legislative arena later this year.

I want to thank our witnesses for attending today, and I look forward to hearing your testimony.

I would now like to welcome my ranking member, the Honorable Rick Boucher from the great State of Virginia. Rick and I have a close personal friendship and we intend, I think, on both sides of the aisle, to forge a great professional relationship for this subcommittee.

[The prepared statement of Hon. Joe Barton follows:]

PREPARED STATEMENT OF HON. JOE BARTON, CHAIRMAN, SUBCOMMITTEE ON ENERGY AND AIR QUALITY

Welcome to the first hearing of the Energy & Commerce Subcommittee on Energy and Air Quality. I am honored and privileged to be Chairman for this Congress. I would like to welcome the new Members of the Subcommittee. From the Republican side are Chris Cox, Greg Ganske, Roy Blunt, and, new to the Committee, George Radanovich, Mary Bono, Greg Walden, and Lee Terry. From the other side of the aisle, I would like to welcome Tom Barrett and Bill Luther who have been on the Energy and Commerce Committee before, and new Committee members Michael Doyle and Chris John. To the new Members and all Members, on both sides of the aisle, I am looking forward to working with you.

This will be a very busy Subcommittee during this Congress. Energy policy is forefront in the minds of the American people now. Last summer, the supply of crude oil was low, and prices for oil, gasoline and other petroleum products became high. During the winter, supplies of home heating oil were low, and prices became high. Lately, natural gas supply has not met demand, and residential gas bills have been high. Meanwhile, the number of refineries continues to dwindle and their capacity becomes further tested. Also, the transportation and distribution outlets for energy do not increase to meet the demands of the country. And, of course, in California, the supply of electric power has not met the amount in demand, and the price of electricity has been high.

During this Congress, this Subcommittee will focus on the balance of supply and demand in energy. We will take an inventory of our Nation's energy capabilities and the obstacles to a better supply-demand balance. Our comprehensive review will be of each different fuel source and of differences between regions. We will work closely with other Committees in the House, our friends in the other body, and the new administration to craft legislation that assures sufficient supply of energy in an environmentally-responsible fashion.

Today we begin a series of hearings dealing with electricity markets. We will focus on the experience of several States which have restructured their electricity markets. On the west coast, California, which passed legislation in 1996. On the east coast, Pennsylvania, which passed its own bill also in 1996. Finally, Ohio, which restructured in 1999. In total, twenty-five States have passed restructuring legislation or have implemented a regulatory order.

This Subcommittee wants to know what are the differences between each State's plan, and what are the similarities? What has a State done right or wrong? What should other States know, and what should Federal legislators know about regional markets? This Subcommittee reported legislation during the last Congress dealing with both retail and wholesale markets, and would do well to learn the lessons from the various State experiences with electric restructuring and wholesale competition.

Later this year, this Subcommittee will review specific parts of the electricity industry and the proper role of Congress and the Federal government in improving supply of generation, the capacity and operation of interstate transmission, and making States more successful when they choose retail electric competition. But, first, a specific look at the experience of three States.

I thank the witnesses for appearing before us today, and I look forward to your testimony.

Mr. BARTON. Mr. Boucher.

Mr. BOUCHER. Well, thank you very much, Mr. Chairman. As you have indicated, this subcommittee does have a long bipartisan tradition of addressing our Nation's energy needs in a serious and a thoughtful manner. Whether under the leadership of Phil Sharp or Dan Schaeffer, we have always tried to put the interests of our Nation ahead of the allure of partisan advantage, and I want to com-

mend you, Chairman Barton, for upholding that tradition during the 106th Congress. I look forward to a continuation of that tradition as we embark on a bipartisan effort to examine and address the Nation's energy and air quality policies during the course of this session of Congress.

Today's hearing is an excellent start to the work that we must undertake as we continue to examine the potential need for Federal legislation to restructure the electricity market. It is incumbent upon the subcommittee to try to gain an understanding of what has happened in California and how the State is trying to resolve its problems and any lessons that we can learn of a general nature from that experience.

To the extent that California's situation proves anomalous, other States that have adopted different retail competition plans may be reassured. States still considering retail competition can learn what to avoid.

In any event, with the economy the size of California's and in light of the collateral damage which is being felt by ratepayers in neighboring States such as Oregon and Washington, it behooves this subcommittee to hold educational hearings, such as the one we are initiating today.

I must, Mr. Chairman, express just a mild measure of concern regarding the short lead time that was provided for this hearing. I know that it is Chairman Barton's preference to work cooperatively with the minority and to give members time to understand the issues and delve deeply into substance. That process is a lot easier when the hearings are undertaken with adequate time to develop the issues, to locate top notch witnesses and provide members with an opportunity to study the testimony in advance.

I hope that we can work toward that goal in planning future hearings of the subcommittee, and in accordance with the conversations that I had earlier this week with the chairman, I am assured that we will do so, and I thank the chairman for that commitment.

I also want to thank the chairman for his commitment to hold an additional hearing regarding the situation in California. Unfortunately, members from the region, Members of Congress from the region, were not accommodated as witnesses during today's hearings, and several witnesses who we believe would be invaluable to this examination were not able to participate today for a variety of reasons.

As I noted before, the chairman and I spoke previously this week and he has made a commitment to have another hearing concerning the situation in California. At that time, interested Members of Congress will be invited to testify, as well as other witnesses whose experience might prove instructional to the subcommittee.

The California experience offers an interesting look into the process and potential pitfalls of restructuring the electricity market. Since 1996, California has embarked steadily on a restructuring plan, and consumers in that State today should be enjoying the benefits of a fully competitive wholesale and retail market. Instead, consumers are faced with frequent power shortage alerts, increased rates and rolling blackouts.

During this hearing and the next, we will examine the causes of these failed consumer expectations.

In addition to examining the restructuring process that California undertook, I think it is important to examine whether the steps that California is currently taking to rectify its situation and whether the steps that the FERC has taken are sufficient to address the needs of both California's consumers and electricity suppliers, as well as the needs of consumers in the western region of the Nation who are also dependent on the same transmission grid and who, in many cases, compete with California for the wholesale power that is available on the West Coast.

Looking at the lessons learned in California, as well as hearing from witnesses from Ohio and Pennsylvania where other restructuring efforts are underway, will provide a useful exercise as we begin our examination of the flaws that still exist in the national competitive wholesale market and whether there is a Federal role to play in fixing that problem.

There are many questions that must be answered. For example, does current law give the FERC the authority to enable a functional national wholesale electricity market? Do the provisions of the Clean Air Act play a significant role in the problems in California? And if so, should we consider Federal legislation to address any specific examples of such a correlation? These are just a beginning to the questions that I think this subcommittee must consider, but today we make a positive beginning.

I look forward to the testimony of the witnesses today and at our future hearing, and let me again say how much I look forward to a continuation of the bipartisan work that Chairman Barton and I have undertaken on these matters, which are of fundamental importance to the Nation's economy.

[The prepared statement of Hon. Rick Boucher follows:]

PREPARED STATEMENT OF HON. RICK BOUCHER, A REPRESENTATIVE IN CONGRESS
FROM THE STATE OF VIRGINIA

Thank you Mr. Chairman, this Subcommittee has a long tradition of working on a bipartisan basis to address our nation's energy needs in a serious and thoughtful manner, whether under the Chairmanship of Phil Sharp or Dan Schaefer, we always have tried to put the interests of our nation ahead of the allure of partisan advantage, and I commend you for upholding that tradition during the 106th Congress. I look forward to a continuation of that tradition as we embark on a bipartisan effort to examine and address the nation's energy and air quality policies in the 107th Congress.

Today's hearing is an excellent start to the work that we must undertake as we continue to examine the potential need for federal legislation to restructure the electricity market. It is incumbent upon the Subcommittee to try to gain an understanding of what has happened in California, how the state is trying to resolve its problems, and any lessons that can be learned from its experience. To the extent California's situation proves anomalous, other states that have adopted different retail competition plans may be reassured. States still considering retail competition may learn what to avoid. In any event, with an economy the size of California's, and in light of the collateral damage being felt by ratepayers in neighboring states such as Oregon and Washington, it behooves this Subcommittee to hold educational hearings such as we are initiating today.

I must express concern, however, about the short lead time provided for this hearing. I know it is Chairman Barton's preference to work cooperatively with the minority, and to give members time to understand the issues and delve deeply into substance. This is much easier to do when hearings are undertaken with adequate time to develop the issues, locate top notch witnesses, and provide members an opportunity to study the testimony in advance. I hope we can work towards that goal

in planning future Subcommittee hearings, and per our conversations this week I am assured that we will do so. I thank the Chairman for that commitment.

I also thank the Chairman for his commitment to hold additional hearings regarding the situation in California. Unfortunately, Members from the region were not allowed to testify in today's hearing and several witnesses whom the minority believe would be invaluable to this examination were not able to participate for a variety of reasons. As I noted before, the Chairman and I spoke previously this week and he has made a commitment to undertake more hearings on this subject in the near future. At that time, interested Members will be allowed to testify as well as other witnesses whose vantage and experience might prove instructional to the Subcommittee.

The California experience offers an interesting look into the process and potential pitfalls of restructuring the electricity market. In 1996, California passed legislation to restructure their electricity market and bring full retail competition to its citizens. Since 1996, California has embarked steadily on a restructuring plan and consumers should be enjoying the benefits of a fully competitive wholesale and retail market. Instead consumers are faced with frequent power shortage alerts, increased rates and rolling blackouts.

The California experience has proven a recipe for disaster: analysts did not adequately anticipate supply demands; utilities were not permitted to purchase power under long term contracts forcing utilities to buy power on the spot market at outrageous prices; weather pattern changes have resulted in decreased capacity for the region's generation units which heavily depend on hydroelectricity; and despite a sharp increase in demand, virtually no new power plants have been built in California in a decade.

In addition to examining the restructuring process that California undertook, it is important to examine whether the steps California is currently taking to rectify its situation and whether the steps FERC has taken are sufficient to address the needs of both California's consumers and electricity suppliers as well as of the needs of consumers in the western region who are also dependent on the same transmission grid.

Looking at the lessons learned in California, as well as hearing from witnesses from Ohio and Pennsylvania where other restructuring efforts are underway will provide a useful exercise as we begin our examination of the flaws that still exist in the wholesale market and whether there is a federal role to play in fixing this problem. There are many questions that must be answered, for example, does current law give FERC the authority to enable a functional wholesale electricity market? Do the provisions of the Clean Air Act play a significant role in the problems in California, and if so should we consider federal legislation to address any specific examples of such a correlation? Those are just a beginning to the questions that we must ask as we examine this matter.

I look forward to the witnesses testimony, the additional hearings and let me say again how I look forward to a continuation of our bipartisan work together on these issues which are of fundamental importance to the nation's economy.

Mr. BARTON. I want to thank you, Congressman Boucher. And I want to repeat for public consumption, so there is no question what I have discussed with you privately, based on your suggestion we will have another hearing specifically on California, if that is the wish of the minority. Also, based on your comments and suggestions, if it is your decision and my decision collectively, we may do a hearing where we specifically have members-only testimony. Now we may do that in conjunction with a hearing. We may do it as a separate stand-alone. If we do that, we will do as many days as is necessary so that all members that wish to participate in terms of putting testimony on the record will do so.

In terms of the timing of future hearings, this first hearing was scheduled as soon as the committee was fully organized on both sides of the aisle. We were slow on our side. You were slower on your side. So both parties are almost equally guilty of slowness. But in the future, at the staff level and the member level, you and I will be a team in deciding, along with the leadership of Mr. Tauzin, the full committee chairman, and Mr. Dingell, the ranking member, the subject and the timing of the hearings.

Mr. BOUCHER. I thank the chairman.

Mr. BARTON. When it is a 50/50 tie, my 50 percent is 1/10th of 1 percent more than your 50 percent, simply because we have to have a way to break the tie. But hopefully there won't be too many cases where we have to go to the tie-breaker mechanism.

So I want to reiterate that we have a lot of work to do, and fortunately energy is not a partisan issue, nor is the environment. So we are going to work together as a team, both at the top and the ranking file of this subcommittee, if I have anything to do about it, and as subcommittee chairman I do have something to do about it.

Mr. BOUCHER. Will the gentleman yield?

Mr. BARTON. I would be happy to yield.

Mr. BOUCHER. I want to thank the chairman for that commitment and again say that his work has been characterized over the years by an outreach to members on the other side, and by bipartisan cooperation, and I want to commend you for that. I look forward to the work of this Congress with you.

Mr. BARTON. Thank you. With that, I want to welcome our new vice chairman of the subcommittee, the Honorable Steve Largent of Oklahoma, for an opening statement.

Mr. LARGENT. Thank you, Mr. Chairman. I will give a slightly different perspective. I guess some think we are moving too fast. I would say we are moving too slow. Thank you for the timeliness of this hearing.

Fortunately, this subcommittee had very little to do with what is happening in California. It is a crisis in the sixth largest economy in the world, and something that I think we have to at least begin educating ourselves on the why and wherefores, on what is taking place in California. So I thank you for holding this hearing, in fact, I think we should have done it even sooner if it had been possible.

Over the last several months, as a Nation, we have been taught some valuable lessons. In Florida, we have learned some lessons on civics, election law, judicial process. I think those are valuable lessons. In California, we are learning some extremely valuable lessons on free market economics. We are learning lessons about supply and demand. We are learning lessons about regulation and the effects that it has on markets, and I think the question that is going to be before this subcommittee and before our full committee is what is the best method to meet those market demands, to balance the law of supply and demand. Is it best to continue to try and meet the demands of the market by allowing to continue the last remaining monopolies in this country, the electric utility monopoly, or is it perhaps better to move to a more transparent and free market where competition is alive and vibrant? I think this question is really the issue.

Over the course of the last couple of years, we have taken off the table Federal mandates to have a date certain when States have to move to electric retail competition. Today, we are now talking at the Federal level about how to clear up the wholesale markets in this country, where there are some really significant problems that exist. And I would tell you that the focus of my effort on this committee is to work with the chairman to resolve these issues. It

can be summed up in three words, and that is transmission, transmission, transmission.

We will focus our attention like a laser beam on how we can resolve the transmission problems that exist today so that we can have vibrant competition in the wholesale market, which does not currently exist, even though it desperately needs so.

So with that, Mr. Chairman, I would like to ask for unanimous consent to submit my full testimony for the record and look forward to the testimony of our witnesses. Thank you.

Mr. BARTON. Without objection, so ordered.

[The prepared statement of Hon. Steve Largent follows:]

PREPARED STATEMENT OF HON. STEVE LARGENT, A REPRESENTATIVE IN CONGRESS
FROM THE STATE OF OKLAHOMA

Mr. Chairman, I've been waiting with a great deal of anticipation for this morning's initial subcommittee hearing of the 107th congress. California's electricity crisis has been in the national news now for almost three months and it's led to the question—have the lights gone out on electricity deregulation?

That's the question state and federal legislators now face after witnessing California's deregulation fiasco. My hope is that California's problems will not undermine sincere debate over the long-term value of getting rid of our last real monopolies and allowing citizens to choose their electricity providers.

In my own home state of Oklahoma, we've passed a state deregulation plan, however, now state legislators are understandably reluctant to move forward with the implementation plan. No one wants to be in the crosshairs as Governor Davis has been over the past few months.

However, it's important to remember that California is unique. Take Silicon Valley for example. The average microchip processing plant uses enough electricity to power 50,000 homes. As a consequence, the demand for electricity has skyrocketed in California over the last decade. At the same time the demand for electricity has failed to keep pace with this rising demand.

Thanks to California's onerous environmental policies, no new generation has been built in over a decade. By way of contrast—my state of Oklahoma will soon have over 9,000 megawatts of new electricity generation capacity. The difference? A generation facility that takes two years to complete in California would take seven years to complete in California due to delays caused in great part by overzealous environmentalists.

California exacerbated the problem with its well-intentioned, but unfortunately, now well thought out deregulation bill, AB 1890. AB 1890's stranded cost recovery provisions virtually ensured that no new competitor would enter the retail market until the costs were fully reimbursed.

California forced its incumbent utilities to purchase power on the day ahead spot market by disallowing the use of hedging tools typically employed by utilities to ensure they don't pay exorbitant prices in the wholesale market.

Finally, California instituted rate caps in an effort to insulate ratepayers from high prices. While caps may be a short term solution, they prevent consumers from receiving true price signals and actually increase demand because there is no incentive to conserve.

On the federal level, proponents of electricity restructuring such as myself are faced with the challenge of convincing our colleagues that federal action won't result in more California-type disasters.

What should we do at the federal level to promote wholesale competition? It should come as no surprise to many of you in this room who have worked with me on this issue for the past 3 or 4 years: transmission, transmission, transmission.

Congress must address the adequacy and regulation of transmission. Today's grid was not built to handle the load generated by today's economy. We must find ways to incentivize the building and placement of new transmission. We must also set clear and transparent rules for the operation of the grid.

I firmly believe that the lights are still on for deregulation. I look forward to working with our able chairman and my colleagues on the subcommittee in a bipartisan manner on this issue. Consumers in California, as well as the rest of the country, deserve nothing less.

Mr. BARTON. We want to welcome back to the subcommittee the Honorable Henry Waxman of the great State of California.

Mr. WAXMAN. Thank you very much, but under the rules, we are called on in the order in which we appeared, so I want to have Mr. Strickland and Mr. Doyle precede me in my opening statement.

Mr. BARTON. All right. I thought you all appeared about simultaneously. If Henry Waxman wants to be a gentleman and yield, I am going to let that happen.

Who was the first?

Mr. DOYLE. We will defer to our senior colleague.

Mr. WAXMAN. All right.

Mr. BARTON. Who was the first? Was it Mr. Doyle or Mr. Strickland?

Mr. STRICKLAND. I was first, but I am going to defer to Mr. Waxman.

Mr. WAXMAN. Well, I thank my colleagues for being so courteous.

Mr. BARTON. Let's watch this exercise in gentlemanliness here. Mr. Waxman of California, who has seniority and has been very active in the past on this subcommittee, we welcome him back.

Mr. WAXMAN. Thank you very much. And I think perhaps I am being deferred to not only because of my age but because I am a Californian and at the moment I see myself as the only Californian present for this hearing.

Mr. BARTON. We have Mr. Radanovich on our side of the aisle.

Mr. WAXMAN. Oh, I didn't see him. I am glad that we have got some reinforcement from California on the committee.

Mr. RADANOVICH. Thank you.

Mr. BARTON. It is a big State.

Mr. WAXMAN. We are tackling an extremely important issue when we look at the California energy issue. Californians are angry and confused. Many people feel as if they are being held hostage by out-of-State energy generators. They believe that these companies are taking advantage of the energy shortage by charging astronomical prices. Others blame our major electric utilities, PG&E and Southern California Edison. They think these companies were the architects of California's deregulation plan, made billions off California consumers in the early years of deregulation and are now seeking a State bailout caused by their own poor planning. And others blame government.

They are angry that California's former Governor Pete Wilson and the California legislature could enact such a flawed deregulation bill. They are dismayed that California's current Governor, Gray Davis and the California legislature, have not yet solved this problem. And they feel abandoned by President Bush and the U.S. Department of Energy, who, they believe, hold the tools to provide immediate relief to California.

Sorting out these issues will be difficult but essential. If we fail to properly diagnose the cause of California's energy problems, we will surely fail in finding a cure, and we may find that other places around the country will continue to make the same mistakes.

I don't have the answers yet, which is why I welcome this hearing, but I do know that there is at least one red herring that is being promoted by special interests looking to exploit California's plight for their own gain. I am talking about the efforts of some

in the energy industry and Washington that blame the Clean Air Act for California's energy problems. The latest example happened just last Friday when the President's spokesman told the press that Governor Davis had asked the administration to waive Federal emission standards for California so that more electricity could be produced. This was hype designed to build support for environmental roll-backs. Governor Davis did not request that President Bush waive emission limits. All he had asked for was assistance in expediting the permitting process.

The fact is the Clean Air Act has not restricted energy production in California. Those plants that need the flexibility to operate additional hours are being given permission to do so, and nine new power plants have received approval to start construction since 1999.

In anticipation of this hearing, I wrote Mike Kenney, the head of the California Air Resources Board, about the impact that environmental regulations were having on California's energy problems. Here is what Mr. Kenney responded: "No essential electricity generation has been curtailed due to air emissions limitations. State law and local regulations provide several means to address permit limitations without disruption of electrical generation or unmitigated damage to air quality." And I am going to ask unanimous consent to make Mr. Kenney's letter part of the record.

Mr. BARTON. Without objection.

[The letter follows:]

AIR RESOURCES BOARD
SACRAMENTO, CALIFORNIA
February 14, 2001

The Honorable HENRY A. WAXMAN
House of Representatives
2204 Rayburn House Office Building
Washington, DC 20515-0529

DEAR REPRESENTATIVE WAXMAN: As you no doubt are aware, during California's current energy crisis, some critics have identified the state's air pollution control programs as the cause of the energy shortage. With respect to the current energy crisis, it is obvious that no one factor can be identified as the cause. The matter is too complicated for such a simple explanation. However, under existing environmental programs Governor Gray Davis has directed that state and local regulators ensure that power generating sources remain in operation under environmentally sound conditions. No essential electricity generation has been curtailed due to air emissions limitations.

Governor Davis, through the recent exercise of his emergency powers under state law, has ensured that power generation will continue. He has added substantially to the state's ability to deal with our current energy situation. Although existing laws and regulations provide mechanisms for addressing our power needs, they can also require substantial time and process. The Governor's actions have ensured that where statutory and regulatory impediments exist, they will be swiftly addressed.

The Governor's clear instructions and grant of authority to the state agencies having jurisdiction over the siting and operation of powerplants will have immediate and substantial impacts on adding new electricity generation sources. Today, the State has already licensed approximately 7,000 MW of new baseload power generation. The State is also pursuing approximately 1,000 MW of new peaker generation that would potentially be on line by this Summer. In sum, the system works. The Governor's utilization of his emergency powers to expedite the process of power plant siting while maintaining environmental standards confirms that California can maintain its environmental and economic objectives.

California has a unique and long history of achieving both economic and environmental success. The Governor's Executive Orders and existing statutes and regulations reflect continuing and unceasing efforts to balance our economic and environmental needs.

Our history also reflects a pattern of success even in the face of unparalleled and significant challenges. California, the state with the largest population in the country, has made incredible strides in improving air quality and public health. At the same time, the State has enjoyed immense population and business growth. During this current energy situation, the State will maintain its record of achieving a balance among all the issues to ensure that a reasonable and successful solution is achieved.

INTRODUCTION

Over the last several months there has been an increasing focus on environmental laws as contributing to the energy crisis. This concern has taken two distinct forms:

1. The charge that environmental laws have prevented maximum utilization of existing electrical generation facilities; and
2. The allegation that environmental laws have prevented bringing new electrical generation facilities online.

The first comment usually reflects a concern that air quality regulations are the primary impediment to power generation. The second comment is less specific and simply reflects a general view that state regulations have prevented major power plant construction. These statements have diverted attention from the true, and complex, causes of the current energy situation and have therefore not contributed to productive efforts to resolve it. The two comments are addressed below.

IMPACTS OF ENVIRONMENTAL LAWS ON EXISTING ELECTRICAL GENERATION

All central station electrical generating facilities must be permitted by the local air pollution control and air quality management districts as stationary sources under the State Implementation Plan (SIP) incorporated district rules. These permits are based in large part upon operator-provided information that includes such factors as hours of operation and fuel type. This information has a direct bearing on the facility's anticipated emissions. Based on this operator-provided data, emission limits are imposed through the air permits. In short, the permits are prepared based on the criteria that best represent the facility's planned operation. It is these operator-defined limits that have been at issue. These facilities are now in a position of having to generate electrical power at rates in excess of those assumed during the permit process to meet public needs.

Despite this unanticipated high level of operation, through the joint efforts of the districts, the Air Resources Board (ARB), and the California Energy Conservation and Development Commission (CEC), as well as the assistance of the U.S. Environmental Protection Agency (U.S. EPA), needed electrical generation has not been interrupted. State law and local regulations provide several means to address permit limitations without disruption of electrical generation or unmitigated damage to air quality.

The ARB has assisted the districts in addressing any potential issues arising out of their efforts to maintain power generation. ARB has maintained close coordination with the U.S. EPA to ensure that state and local response to the energy situation does not raise concerns at the federal level. We have approached the electricity shortage with an environmentally sound balance of need awareness and impact concern. U.S. EPA has indicated its understanding of the complexities California is facing and has indicated a continued willingness to assist.

At the Governor's direction, the ARB has attempted to balance the State's energy needs with the public's right to clean air. *Existing air quality regulations have provided the flexibility to address expeditiously the unexpected power demands of the State without material harm to air quality.* These accommodations have been completed in very short time frames and have ensured continued power generation. Although this task previously required a degree of time and process, our ability to accomplish this task has now been significantly enhanced by the Governor's Executive Orders.

The additional grants of authority to the Governor under the Emergency Services Act augments existing statutory powers and increases the ability of state and local agencies to work together in significantly reduced time frames. Whether it is providing for an existing source to operate beyond its permitted hours of operation or streamlining certification of new peaking sources, the Governor's emergency Executive Orders provide even greater flexibility in responding to source specific generation issues than previously existed.

IMPACTS OF ENVIRONMENTAL LAWS ON BRINGING NEW ELECTRICAL GENERATION ONLINE

The second area of criticism is that environmental laws impede bringing new electrical generation online. All new proposed powerplants must be constructed and operated in compliance with applicable federal, state, and local air pollution requirements. Within California, the 35 local air pollution control and air quality management districts are responsible for regulating emissions from stationary sources within their jurisdiction, including powerplants. At the state level, the ARB is the agency charged with coordinating efforts to attain and maintain federal and state ambient air quality standards and comply with the requirements of the federal Clean Air Act. To this end, the ARB coordinates the activities of all the districts in order to comply with the Clean Air Act.

Some have cited California's environmental laws as the reason new power generation has not been built in recent years. However, a review of CEC's siting history demonstrates otherwise. Information from the CEC shows approval of 36 projects totaling 4,313 MW of generation from 1979 to 1996. Since April 1999, the CEC has approved 9 major power projects (including one expansion) totaling an additional 6,278 MW.¹ Six of these plants are under construction and four of those six are expected to be online this year, with start dates spanning from July through November. Another 14 projects (new sitings and expansions) are currently under review for an additional 7,736 MW of capacity. Lastly, there is still an additional 7,960 MW of capacity that has been publicly announced and for which the CEC anticipates receiving applications this year.

More specifically, some have also argued that costs of compliance with air quality regulations are too substantial and that they must be relaxed if we are to achieve the power generation we need. This argument generally has translated into one of insufficient environmental offsets for the siting of powerplants. This argument is flawed. Today, as mentioned above, approximately 15,000 MW of new electrical generation has either been approved or is in the licensing process. All of these projects have included environmental offset packages. We have also heard this argument with regard to the siting of new peaking facilities. Here, a problem potentially did exist for expeditious siting; however, the Governor has created an emission offset bank at ARB that will ensure that any such peaking facility can be sited.

The CEC's siting process is designed to take 12 months. However, a number of factors, other than environmental regulations, have recently influenced individual project timelines. Over the last two to three years, the actions of local activists, businesses, and others have slowed the pace of some projects. In fact, power generators themselves have utilized the siting process to hold up the licensing of a competitor. Since 1997, competing companies have intervened in 12 of the 21 projects proposed licensing. Their participation has slowed the process in at least four cases.

Constraints on electrical generation capacity from central station powerplants have caused increased interest in the use of distributed generation (DG). DG is electrical generation near the place of use. Yesterday, the Governor announced his support for legislative action that will provide incentives for distributed generation. Previously, the Governor signed Senate Bill 1298 (on September 25, 2000) which directs ARB to adopt a certification program and uniform emissions standards for DG technologies that are exempt from the permitting requirements of districts. This program must be in effect by January 1, 2003. ARB is on a fast track with this program and expects to propose its certification program and uniform emissions standards for ARB Board consideration by the end of this year.

The districts, ARB and CEO have been working diligently within the scope of the siting process and applicable regulations to site power plant projects, while adequately addressing air quality concerns. It is apparent that air quality regulations have not been the key impediment in permitting powerplants.

As the foregoing demonstrates, it is not environmental regulation that has prevented the creation of additional power generation. Rather, many factors have contributed to the current crisis. Among those is also the fact that Market participants can and do manipulate the electrical power market by withholding capacity in order to maximize their price of electricity.

Even the Federal Energy Regulatory Commission (FERC) agrees. Although it found insufficient evidence of market manipulation by any individual market participant:

"... there was clear evidence that the California market structure and rules provide the opportunity for sellers to exercise market power when supply is tight and can result in unjust and unreasonable rates under the EPA... we reaffirm

¹ Compare: during the entire Wilson Administration, a total of 1465 MW of power was added.

our findings that unjust and unreasonable rates were charged and could continue to be charged unless remedies are implemented.”²

ARB will continue its efforts to ensure that California has the maximum electrical power output possible. ARB will work to mitigate the adverse effects of this increased electrical output to the extent it does not impair it. This can be done within the confines of existing law. As Governor Davis has said, California is demonstrating that we can cut red tape, build more powerplants *and* continue to protect the environment.

If you have any questions, please feel free to call me at (916) 445-4383.

Sincerely,

MICHAEL P. KENNY
Executive Officer

cc: Congressman John D. Dingell,
Ranking Democratic Member,
Committee on Energy and Commerce

Mr. WAXMAN. If air pollution laws were causing the energy crisis, Los Angeles should be having the worst problems in California because LA has the toughest air quality regulations in the Nation, but the Los Angeles Department of Water and Power, which did not participate in the deregulation plan, is supplying Los Angeles with plenty of power. In fact, despite the tough air pollution laws and Los Angeles’ tremendous economic growth, DWP is able to generate surplus energy electricity to be used by other parts of California.

Those who would blame the Clean Air Act and other environmental laws are doing a double disservice to my State. Their efforts to roll back environmental laws not only threaten the quality of our environment, but they also make it more difficult to solve California’s energy problems. Turning this issue into an environmental battle is a huge mistake. It will distract us from identifying and addressing the true causes of California’s power crisis.

Times of difficulty and crisis usually bring out the best in Americans. I hope that this will be the case once again. We need to work together to find the right solution for California, not cynically use California’s plight as a ruse for undermining the Nation’s environmental laws.

Mr. Chairman, I thank you for this opportunity to make this opening statement. I look forward to the hearing that you promised us a few minutes ago on the California issue, where you will invite not only members who wish to testify, but those interested parties who have something to contribute. It is unfortunate that many weren’t able to testify today, but we will look forward to hearing from them and getting their testimony on the record at the subsequent hearing that you have suggested you would be calling. Thank you.

Mr. BARTON. Thank you, Congressman.

I want to just point out in terms of the record, in terms of the witnesses from California, we invited every witness that the majority and the minority asked to be invited from California and because of—and we had a number of distinguished Californians who initially agreed to testify, and then for various reasons were not able to.

Mr. WAXMAN. Mr. Chairman, I certainly didn’t mean a criticism for which you should respond, because I wasn’t criticizing anything

²Order Directing Remedies for California Wholesale Market 91 FERC 61,294 December 15, 2000 (California Order 215 at pp. 33, 34).

except to say there are others who ought to be on the record, not just from California, but others who have some expertise on this subject. I know that the head of our delegation, Congressman Sam Farr, wrote you a letter with a request for witnesses, which were not accommodated. Witnesses can't always be accommodated at every hearing, and as long as we get a chance to hear from people who have something relevant to say in the future, that is all any of can request.

Mr. BARTON. We are going to give every opportunity to make that happen.

I want to point out that we are not going to hold people tightly today to our 3-minute opening statement requirement if you are not chairman or ranking member, but our rules do allow for opening statements no longer than 3 minutes, and I would hope that we could at least make a cursory attempt to comply with that.

Mr. Shimkus of Illinois, who was the first member here, we would be happy to recognize for an opening statement.

Mr. SHIMKUS. First on our side. We are so nice today. That is great.

Mr. BARTON. We are going to be nice all year long. This is the nice subcommittee.

Mr. SHIMKUS. It is great to be here dealing with energy dereg right now. This will be starting my fifth year. There is a lot of lessons across the country on those who have been successful, those who have fallen short. This hearing is really important, and I agree with my colleague Steve Largent. Transmission, transmission, transmission is the bottom line of how we need to address the competitive market in the future.

I would like to submit into the record an article written by Harry Levins. Sometimes I question journalism and how they can write because they are trained to be writers not in the field that they are writing for, but this is the second time that I have read articles by Harry Levins from the Post-Dispatch that is right on. One was early in the energy dereg on stranded costs, and this was one just a couple of days ago, and I think it would be a great credit for our colleagues to get a chance to read it, and if I have your permission, I would like to submit that for the record.

Mr. BARTON. Without objection, so ordered.

Mr. SHIMKUS. Also on the second panel, I will have John Rowe of Exelon, ComEd in Illinois, present, and also Peter Esposito of Dynegy. Dynegy is obviously from the great State of Texas, but also has a major presence now in Illinois. What we have learned in Illinois is that you can't rely on one single source of a commodity product to power generating facilities. When you do that, you fail.

Illinois hasn't totally been successful. We did have really high price spikes of 2 years ago based upon the summer, but as California will get through this, Illinois got through it also. But it does require the competitive market to be a competitive market, and for people to recover capital investments when they build power plants and when they build transmission facilities. So this is going to be a very interesting year. I think many of us have been waiting for a couple of years to get to this point. Sometimes it takes crises to raise issues of national level that—an issue like California that helps us address common economic principles of supply and de-

mand and, and there will be some people who shake their heads out here, the aspect of physics that even though electricity is a commodity, it is not a stored commodity. Those electrons are just bebopping all over the place. It creates some interesting different challenges than just a commodity product.

So I am excited about it, Mr. Chairman, and with that, I will yield back my time.

[The prepared statement of Hon. John Shimkus follows:]

PREPARED STATEMENT OF HON. JOHN SHIMKUS, A REPRESENTATIVE IN CONGRESS
FROM THE STATE OF ILLINOIS

Good morning, Mr. Chairman and to all who have shown up this morning. I would like to thank the Chairman for calling this hearing on this issue. There is a lot we can learn, not only from the California situation, but from other states as well.

I am very happy to see two companies represented today that play important roles in the successful implementation of my home state of Illinois's deregulation law. John Rowe of Exelon, ComEd in Illinois, and Peter Esposito of Dynegy.

I would like to take a moment to speak on, not what went wrong in California, but what went right in Illinois. To Illinois' credit, critical policy decisions were made on the basis of sound economics, rather than political expediency. And, the process used to develop the eventual legislation was inclusive rather than exclusive. All stake holders were invited to sit down and help draft the legislation.

Illinois' more measured approach has given Illinois electricity companies the opportunity to prepare for a competitive market, while introducing the concept of choice to consumers. The Illinois law recognized that any attempt to undo a century of economic regulation could not occur overnight. Nor has the process been without problems, as was seen during the price spikes in the cost of electricity during the summer of 1999.

Unlike California, Illinois did not require utilities to sell their power plants. Instead, when Illinois utilities chose to sell their power plants, the Illinois Commerce Commission required long-term contracts between the new owners and the electricity company to guarantee that consumers demand will be met at reasonable prices.

One important factor in Illinois success (so far) is that generation of electricity in Illinois comes from a diverse group of generation sources. Coal, nuclear, natural gas and renewables all play an important role in the generation of electricity in Illinois. This balanced energy portfolio means that Illinois is not susceptible to price spikes that are a result of one form of generation becoming too expensive, like we are seeing currently because of the high cost of natural gas. This is a lesson I think the rest of the country should look at.

Again, thank you for having this hearing today Chairman Barton. I look forward to hearing how other states are handling electricity deregulation and what lessons we can learn from them.

[Sunday, February 11, 2001]

STATES HOPE TO LEARN FROM CALIFORNIA'S MISTAKES

By Harry Levins, Post-Dispatch Senior Writer

In hindsight, the state's deregulation plan was a mess in the making. New power plants never sprang up. And planners grossly underestimated demand.

California made a mess of deregulating electric power. On that, just about everybody agrees.

But will chaos stalk other states that deregulate?

"What's happening in California couldn't happen in Illinois," says economics Professor Sanford Levin of Southern Illinois University at Edwardsville. He speaks with authority; after all, he served as a utility regulator on the Illinois Commerce Commission from 1984-86.

Illinois has already started down the path of deregulation. Missouri has yet to move, although most people expect deregulation to come sooner or later. In the meantime, Missouri can take a long look at California's mistakes.

"The 'Show Me' motto really does pay off sometimes," says Dan Cole, senior vice president of Ameren Corp., the parent company of Missouri's AmerenUE. With California showing other states how not to deregulate, the process should pack less pain here.

In fact, it seems to be working well in Pennsylvania. That state has been deregulated about as long as California. But in Pennsylvania, the theory works as advertised. Competition has given Pennsylvanians choices—and has held their bills down.

So what went wrong in California? And what can Missouri and Illinois learn from California's foul-up?

"We've pulled the plug"

For most of the 20th century, all states regulated electric utilities. The thinking held that power was too vital to society to be tossed into the whims of the free market.

The utilities agreed to serve everybody in their area as reliably as possible, at rates set by the state. In return, the state agreed to set those rates high enough to cover the utility's costs, plus a certain percentage for profit.

The formula was fairly standard from state to state. Even so, the rates weren't. The Midwest enjoyed generally low rates. The Northeast and California paid a premium.

California sits far from the coal fields of the Midwest. The stuff had to be shipped in, at great cost. Anyway, just about everything costs more in California.

But industries in California groused at paying higher power bills than their competitors paid in places like Missouri. The California executives said that although their businesses had to play by the free-market rules, the state's utilities did not.

The executives had a point.

A regulated utility is all but guaranteed a profit. What's more, a regulated utility's profits go up as its costs go up. Under the old system, nothing prodded utilities to cut costs. At Wisconsin Power & Light, the top dog once said, only half jokingly, "This is the only business in the world where you can increase your profits by re-decorating your office."

But starting in the late '70s, a wave of deregulation swept through the land. Suddenly, competition took hold among airlines—and trucking companies, railroads, phone companies and so on.

California wasn't the first state to deregulate power. (New Hampshire took that title, in May 1996.) But California was the first big state to do so, and the state that the rest of the nation watched.

On Sept. 23, 1996, then-Gov. Pete Wilson signed the deregulation bill, looked up and said: "We've pulled the plug on another outdated monopoly and replaced it with the promise of a new era of competition."

Now, the promise has gone sour—so sour that Wilson's successor, Gray Davis, calls deregulation "a colossal and dangerous failure."

Part of the problem lies beyond California's control. But in hindsight, California's deregulation plan looks like a blueprint for a blunder.

A plan built on flaws

The people who drew up California's plan in the early '90s had to make some assumptions:

- * The planners assumed that if they forced the utilities to sell off their power plants, they'd spare Californians any sweetheart deals between the wholesalers and retailers of power.
- * The planners assumed that outsiders would flock into California's massive market to build power plants.
- * The planners assumed that a power grid built for a regulated era would serve just as well for a deregulated era.

Wrong, wrong and wrong.

California's utilities sold most of their generating plants to outsiders. But the state failed to tie the buyers down to long-term contracts on selling the power back to California. In fact, the state barred most long-term deals.

The planners looked back to the late '70s and early '80s, when California's utilities got locked into wildly overpriced long-term deals to buy bits and pieces of power generated by solar and wind power. The planners told themselves, "We'll not make that mistake again."

In effect, California was like a family that sells its house and then rents it back without first signing a long-term lease.

As for those new power plants that would spring up: They didn't. California is hostile territory for power plants. Nobody wants one in his back yard.

Also, power companies decided to hold off on building plants until they saw how deregulation shook out. Nobody wanted to invest in the unknown. Anyway, most of the state's newer plants burn natural gas, which has recently flared up in price.

Finally, California's stern environmental laws amount to an obstacle course for construction.

California has nine big plants going up or on the drawing boards. Contrast that with Texas, which will welcome deregulation two years down the road with 70 new plants either on line, being built or in the planning stage.

As for those transmission lines, the "power grid"—they're showing the strain. The original design was meant to let utilities hook up with neighboring utilities. That way, they could help one another at crunch time.

But nobody designed the grid as a long-haul highway for moving power vast distances. The California grid has bottlenecks that make an already tight supply even tighter. And under the state's deregulation plan, nobody has much incentive to string more lines.

Supply and demand

On top of the faulty assumptions, California's planners made some downright bad judgments.

They grossly underestimated the demand for power, which boomed along with the state's economy. Back in the early '90s, for instance, nobody thought much about the Internet. But today, some people estimate, Internet-related activity eats up 8 percent of America's power.

And when it comes to the Internet, California is action central. A middling microchip plant sucks up as much power as a small steel mill. A center for computer servers and routers will drain off almost 20 times as much power as the same-sized office building next door.

The planners overlooked population growth in California's neighboring states. Even in the best of times, across a year, California must import about a quarter of its power. But the handiest sources—booming states like Arizona, Oregon, Washington and Nevada—now have less spare power to feed California.

(Much of the cheapest imported power came from the hydroelectric plants along the rivers of the Pacific Northwest. But the Northwest has hit a dry spell. When air-conditioning season kicks in this summer, it may well open a long and very hot summer in California.)

Finally, the planners seem to have made their biggest blunder by barring long-term contracts.

Instead, California set up something called the Power Exchange, or PX. The PX bought and sold power a day ahead of time. Generators would notify the PX how much power they'd sell the next day, and for how much. Utilities would tell the PX how much power they'd need the next day. The PX computers would draw the supply-and-demand curves and set the price.

But the system needed a safety switch. If the day-before numbers were wrong—if the supply or demand strayed from the predictions—the state had to have an agency that could step in right away. That's because the quirky nature of electricity means that supply and demand must balance perfectly. Should they wander out of whack, the lights go out, or substations go up in smoke.

The safety switch is called the California Independent System Operator, or Cal-ISO. To keep supply and demand in balance, Cal-ISO can put out the call for more power, right now. But this right-now power costs more—sometimes, a lot more.

The power generators soon learned to play the system. On Monday, they could shave back their offerings to the PX toward covering Tuesday's demand. Then on Tuesday, they could sell their power at a premium to the desperate Cal-ISO.

Investigators are poring through the records to see whether the generators stepped outside the law's bounds. But the rules as written give generators every incentive to hold back their power until they can get top dollar for it.

The state's plan called for temporary rate caps for consumers. But by May 2002—or as soon as each utility paid off its past investments, whichever came first—the rate caps would come off. Consumers would pay the free-market rate for power.

The theory held that competition would do more than hold down rates. Competition would actually cut rates.

Competition arrived on July 1, 1999, for the 3 million customers of San Diego Gas & Electric. For the first summer and winter, nobody seemed to notice.

But last summer, hot weather set in, demand rose—and suddenly, electric bills tripled. Consumers hollered, and the California Legislature listened. By the end of August, the rate caps went back in place.

Now, San Diego Gas & Electric had a real problem. It had to pay the free-market rate for the power it sent through its transmission and distribution lines to customers' homes. But the customers were paying SDG&E the regulated rate. For a utility, that's the worst of both possible worlds: buying dear and selling cheap.

The problem soon spread northward to California's other two big utilities. Last month, they teetered on the brink of bankruptcy before the state stepped in. Now, the state is brokering long-range contracts with generators.

But until things settle down, Californians are holding their breath, wondering whether rolling blackouts will put them in the dark.

It's a mess. But so far, it seems to be a uniquely California mess. Other states have ducked California's bullets.

In Illinois, for example, the power supply is ample, and getting even more so.

Illinois is phasing in deregulation instead of trying to make the jump in one bound. Businesses have been the first to feel it. By the time residential customers enter the free market in May of next year, most of the kinks should be smoothed out.

Illinois hasn't put a gun to the utilities to sell their generating plants. Nor has Illinois or any other state barred utilities from hedging against price jumps by buying power through long-term contracts.

Does deregulation work? Ask satisfied Pennsylvanian Bonnie Graham, a college administrator in Philadelphia.

In the old days, Graham's monthly power bill from the Philadelphia Electric Co. ran to about \$80. Now, she pays about \$60 to her new provider, Green Mountain Energy of Austin, Texas. She says, "I'd never go back."

Illinois hopes to repeat the success of Pennsylvania and avoid the calamity of California. People like SIUE's Levin are confident that Illinois can hold the gremlins of California at bay.

Meanwhile, Missouri's legislators will probably sit tight this session to see what happens elsewhere. As Ameren's Cole notes, being in the second wave isn't always a bad thing.

But Cole says that at some point, Missouri will have to move into the deregulated future. California aside, he says, development is following deregulation. Businesses are building where rates are cheaper.

"Sure, there are problems with deregulation," Cole says. "But we're pushing it in Missouri, because we like what we see in Illinois."

Mr. BARTON. We are going to let you bebop a little bit this year, too, Mr. Shimkus.

We are going to go now to Mr. Strickland of Ohio for an opening statement.

Mr. STRICKLAND. Thank you, Mr. Chairman. Mr. Chairman, I am going to be moving in and out of the committee today because I have divided responsibilities, as I think many of us do.

I would like to begin my comments by welcoming an Ohioan, Dr. Schriber, who is the chairman of the Ohio PUCO. We have worked together on protecting the uranium enrichment plants in southern Ohio and other matters, and I am very proud, Alan, that you are here representing the Buckeye State and look forward to your testimony.

Mr. SCHRIBER. Thank you.

Mr. STRICKLAND. Mr. Chairman, this country needs a comprehensive energy policy. We need to utilize coal. We have, I am told, hundreds of years of coal reserves in this country.

We need to increase refining capacity. We need to use more ethanol and other such energy sources, and we need to stress conservation.

I am terribly concerned that the nuclear side of our energy needs is in serious jeopardy. Approximately 20 percent of our energy needs, electricity in this country, is generated by nuclear power plants, and we have only two remaining enrichment facilities in this country, and one will be closed in June of this year, and I wonder how many members of this Congress understand what is facing us.

It is a looming crisis, and as we consider all aspects of our energy needs, I hope that this committee will, at some point in the future, focus on the critical needs of our nuclear energy.

With that, I want to thank you for this committee and I look forward to learning a great deal today. Thank you.

Mr. BARTON. Thank you. And I would share many of the sentiments that you echoed in your opening statement. I think they are very well put.

We want to welcome a new member of the committee and the subcommittee to this hearing, Mr. Walden of Oregon.

Mr. WALDEN. Thank you very much, Mr. Chairman. I am delighted to be on this subcommittee and on the full committee and appreciate your expeditious efforts to have this hearing scheduled.

There is no greater issue affecting the Pacific Northwest than the energy crisis that is afflicting California. To say that there isn't a collision between the environment and energy production is to ignore the basic problem we have in the northwest, because when we exceed the biological opinion on the river system to flow water through the turbines to produce power to prevent blackouts and brownouts in California, we are engaged in that debate between the environment and energy. And that is happening now in the Pacific Northwest. It happened last summer when California faced brownouts.

We exceeded the biological opinion to protect and preserve salmon and restore their runs in order to bail out California. Now we are in that same spot market with California competing for energy at a time when our peak loads are there. It is a huge problem that is affecting industry and community from farmers to production of aluminum in my district and throughout Oregon, and I am delighted that today we are going to begin to hear what happened in California, what is happening and then take a look, as the committee progresses, on what can be done to work our way out of this situation.

Mr. Chairman, I think we need several things, a thorough analysis of all the power assets, especially in the Pacific Northwest hydro system, to determine what is fully in use, what is not and why, and what could be put into production. 70 percent of our power in the northwest comes from hydro. We need a thorough analysis of the licensing requirements and time lines, both from FERC and as it relates to hydro relicensing as well as other facilities. Do these time lines make sense in today's environment? And are there ways to streamline the time lines while continuing to ensure environmental quality and protection?

We need a thorough analysis of incentives for renewable energy and conservation, efforts that we are certainly promoting in the northwest, because the cheapest production of power is that which is never used that results from conservation, and so in this time of great crisis, we need to be moving forward on conservation as well as production of energy and looking at the alternatives and the renewables.

We also need a thorough analysis of the transmission system, both its capability, capacity and reliance. As I have been told by leaders on northwest energy issues, that we could go ahead and put plants on-line, perhaps using clean coal technology further to the east in Wyoming and Montana and yet lack the transmission capability and capacity to send that power to where it is needed most. And I know that is also an issue in California between the

southern part and the northern part. They may have a surplus in the south, but you have to route it up through the northwest to get it to the northern end of California, and we need to be looking at that. And again, siting issues, construction issues and how those Federal laws interact are all critical elements of making sure we have both a reliable and sufficient power supply.

Mr. Chairman, thank you for this hearing. I look forward to serving with you on this committee.

Mr. BARTON. Thank you. We look forward to working with you.

We also want to welcome a new member of the full committee and the subcommittee to his first subcommittee hearing, Mr. Doyle of Pennsylvania, who at the appropriate time will introduce the witness from Pennsylvania.

Mr. Doyle.

Mr. DOYLE. Thank you very much, Mr. Chairman, and thank you for convening this hearing to examine the electric supply and market problems in California and to further determine the extent to which conclusions can be made about the distinct roles of Federal and State regulations through a comparison of electricity choice plans enacted in Pennsylvania and Ohio. Just as the California power crisis has sparked a national debate on deregulation, it has also heightened the need for a full and serious discussion about what constitutes a successful State regulation plan. One thing that can be learned from a comparison of California and Pennsylvania is that regional factors should not be ignored, but should guide the formulation and implementation of a State's plan. And while population, climate and economic development trends all are important regional factors to consider, it is of the utmost importance that States also look at the factors of energy generation, transmission and distribution in much the same ways.

California has experienced an increase in population, severe weather and an economic growth and information technology which requires significant amounts of power. But California's plan seemingly did not incorporate complementary components into their design structure. California didn't address serious generation, transmission and distribution deficiencies adequately to reflect emerging market and consumer demands.

While Pennsylvania supplies all of its own energy, pays close attention to maintaining core capacity of its energy producing infrastructure and allows for energy consortiums, California has not built a single new power plant since before restructuring took place. This, despite the fact that in 4 years between 1996 and 2000, electricity consumption grew by approximately 9 percent.

Between 1999 and 2000, electricity consumption in California grew by 15 percent. And keep in mind that even prior to these trends, California never produced 100 percent of the energy used but relied upon imported energy from other States. To compound this problem, generation capacity has been off-line for maintenance and their transmission system is constrained. As a result, prices being paid by consumers and businesses have skyrocketed. Not one facet of the plan appears to be interfacing well with the others. In Pennsylvania, however, the plan is reflective of and takes into consideration regional factors and has, in turn, accomplished its goals

of creating more choice, maintaining a dependable energy supply and lowering costs.

As Chairman Quain will speak to later, when Pennsylvania began electricity competition in 1997, rates were on the average 15 percent higher than elsewhere in the United States. Today, Pennsylvanians pay rates on average 4.4 percent lower than elsewhere in the country.

In order to gain greater insight from this comparative approach, we must also examine how the plans approach the issues of stranded costs, price caps, universal service, public benefits and a host of other important issues. We must also examine how these States approach the relationship between restructuring electricity generation and existing environmental regulations. These are the tougher matters that I believe we must effectively deal with in order to determine our appropriate role in energy deregulation.

I look forward to working with my fellow members on the subcommittee in fashioning a cohesive response to the complex and demanding set of issues before us today.

Thank you, Mr. Chairman.

Mr. BARTON. I want to thank the gentleman for that opening statement. And I have got to say for a member who has never been on the committee or the subcommittee before, to give that kind of an opening statement, very impressive. Sounds to me like if I didn't know better, Chairman Dingell wrote that statement for you, or something. I am not going to go there, but it is very impressive.

We would now like to hear from another new subcommittee and full committee member from the great State of Nebraska, the big red machine, Mr. Lee Terry, Congressman Terry, excuse me.

Mr. TERRY. I answer to everything.

Thank you, Mr. Chairman, for calling this. I will submit my formal statement for the record for time. There are a couple of issues that have been brought up that I want to just casually mention for you, Mr. Chairman. I was contacted by a contractor, a developer, who is currently trying to build a power plant in California, expressing incredible frustration over the permitting, licensing procedures. They are going to meet with me next week to go over the details of that. But part of their frustration is that they are in the process of building this. They thought at the time of crisis that it would be expedited, but it isn't. So we will go over the details of that.

But, you know, we talk about so many levels of problems, and I wonder if part of the discussion in any of these hearings are going to be at the government or bureaucratic level. I don't know if it is bureaucratic indifference or incompetence, or if there are truly environmental reasons that don't allow them to expedite at time of emergencies like this. But we would think that producing and building new power plants would be a priority in the State of California. Evidently within the government, the message is it is not. So I hope that is an area that we will hear about in one of our hearings amongst the several other items of shortages in the supply lines. Thank you for holding this hearing.

Mr. BARTON. Thank you. Another new committee member and subcommittee member from the great State of Louisiana, Congress-

man John. I am not sure this committee is ready for two Louisianans, but we welcome you to this subcommittee.

Mr. JOHN. One on each side of the aisle, too.

Thank you, Mr. Chairman, and ranking member, for holding this committee meeting. I am looking forward to not only serving on the full committee, but also this subcommittee, because I think that some of the issues that we are going to be addressing and that this country must address will come right through this subcommittee. Today's hearing is about the problems out in California, I am really looking forward to hearing from the panelists here, because I believe our role in this committee is not to blame anyone for what has already happened because there is enough blame going around, whether it is the State, the Federal Government or anywhere in between. But I think we should take a look at this situation, find out all of the facts that have contributed to where we are today, and take that unfortunate circumstance and maybe overlay that on to how we can make a better situation. You know, today it is California. This summer, it could be Florida. It could be Louisiana. I believe that as we look into the future of electric generation and all of the different things that are happening out there, we are truly in a new time, a new economy, an e-economy, with the demands on our electronics, whether it is our pagers, or our cell phones.

I just got out of a hearing that opened my eyes on some of the things that we are going to have to address in the future as far as our demand for electricity. So there are a lot of items that we are going to have to look at, and I look forward to listening and learning the lessons here, but not blaming any one individual or government, but just to learn from this so that we don't make these kinds of mistakes again. We must look at the price of natural gas, the oncoming line of new generating plants that are fueled by natural gas, the effect of cold winters, and other contributing factors that will impact our energy needs. So thank you, Mr. Chairman. I look forward to this hearing as we proceed.

Mr. BARTON. Has the gentlemen completed his statement?

Mr. JOHN. Yes.

Mr. BARTON. I am sorry. I was in consultation with the majority staff director.

On our side we now go to Mr. Whitfield from the great State of Kentucky, one of our veteran subcommittee members.

Mr. WHITFIELD. Mr. Chairman, thank you very much. I would just make the comment that over the last 8 years or so there has been an effort in this country to reduce the use of coal, which is our most abundant resource providing about 55 percent of the electricity produced in our country. I know that we must take steps to encourage the use of coal while meeting environmental standards. I would also touch on my friends from Ohio, Mr. Strickland's comments about nuclear energy, and say that I do think we must ensure that we always have the domestic capability to enrich uranium in the U.S. With the closing of the plant in Portsmouth and the only other plant in Paducah, that is something that we have to be concerned about.

I yield back the balance of my time.

Mr. BARTON. I thank the gentleman from Kentucky. We look forward to working with him.

We would now like to hear from another veteran of the subcommittee who do yeomen's work in the last Congress on these issues, Mr. Sawyer of Ohio.

Mr. SAWYER. Well, thank you, Mr. Chairman. Thank you for your leadership over the previous Congress and the one we are coming into.

I would like to take just a moment to echo the remarks of my colleague from Ohio, Ted Strickland, on Dr. Alan Schriber, who has now been a mainstay of energy management and regulation in Ohio for now into his third decade, not all of three decades, but components of three different decades. His leadership has been of enormous value to all of us.

Our hearing today is about a multidimensional problem. It touches on all of the topics that we have heard members refer to, but I would like to focus my remarks today on the importance of transmission, with the grid being the literal backbone of the electrical system in the United States. Unless we continue to improve and expand the transmission grid, the system simply will not sustain the growth in our economy. The linkages are just that direct. In the long run, we risk potentially catastrophic breakdowns if we don't both expand and maintain the grid to match changes in demand.

I would like to refer to an article from the Los Angeles Times from January of this year, *Power Line Traffic Jams Add to Energy Woes*. It warned that an antiquated and overworked system of electric transmission lines could leave much of California starved for power, even if the State can eventually generate and import enough electricity to serve its 34 million residents. The State's transmission system, the article continues, has long been neglected, a victim of poor planning, unexpected growth and electricity consumption, and regulations that make the lines a poor investment. Indeed, and I continue to quote, electricity use in the last decade has grown twice as fast as the new transmission capacity. Many have focused on the lack of generation in California, but transmission is lagging even further behind. Quote, the State is planning to boost generation capacity by 25 percent, but its current planning leads toward expanding the transmission capacity only by about 5 percent.

California is not the only part of the country experiencing this particular problem. It is much broader. Tuesday's *Energy Daily* had an article citing a study by the Mid-Continent Area, power pool that, quote, calls for upgrades to more than 2,700 miles of transmission lines in the map system to boost reliability but warns that existing transmission rates are not high enough to justify investment in new transmission projects. We genuinely have a national problem and its dimensions range from capital formation to siting decisions.

How do we close the gap between transmission capacity and demand? I believe it requires planning and thoughtful attention to long-term needs that promotes rather than discourages investment in the infrastructure needed to sustain competition. It requires design and maintenance standards and operating protocols appropriate to high speed electrical—a high speed electrical highway,

and it requires timely locational decisions to meet the changing needs of the customer base.

Since I started talking about transmission investment, I have been gratified to see that the spread of concern with regard to that we have moved from simple repeal of PUCA and PURPA and putting a date certain for State action to the kind of discussion that we are having today.

But a funny thing happened on the way to the ISO. Electricity is becoming a riskier business than ever with more need than ever to attract capital and to assure access and reliability.

In closing, just let me say that according to Chairman Eber of the FERC, quote, transmission must become a stand-alone business and respond to the market. It must do so, however, within the framework of regulation, though in a new form.

That is what is happening. It will call on us to think through new roles for a Federal framework in restructuring regional markets. That is to say, not more FERC and maybe not less FERC but perhaps a different FERC.

Thank you, Mr. Chairman, I appreciate your flexibility.

Mr. BARTON. Thank you, Congressman Sawyer.

We now want to welcome our full committee chairman, the distinguished Louisianan, Mr. Billy Tauzin—Congressman, Chairman Billy Tauzin, who has not only put energy back in the name of Energy and Commerce, we have a chairman who has put energy back into the chairman's seat at Energy and Commerce.

Chairman TAUZIN. Thank you, Joe.

Thank you very much, Joe. We are all getting used to new names, and while we are celebrating new names, in fact, the fact that we have named the Commerce Committee, renamed it Energy and Commerce, is not just for a light show. It is real. We have recognized that we are facing incredibly another energy crisis in this country and we need to move quickly. It is no secret that we have not had an energy policy. If we have had one, it may have best been described as an anti-energy policy for some time now.

Defining a policy that is compatible to the needs of our country and its energy demands and is compatible to the requirements of our clean air policy and clean water policy and land use policies in this country is going to be a demanding and awesome task and, Joe, I want to thank you and the members of the committee on both sides of the aisle for the energy which you have brought already to the organization of this hearing on California, and the many hearings that we are going to have and discussions we are going to have with Vice President Cheney and the task force assembled at the executive level, and with Senator Murkowski and the senators who have pledged to work with us to define a new energy policy for America that fairly balances all of those mighty concerns.

If you are focusing today on California, tomorrow we will be focusing on New York; we will be focusing on Chicago; on Boston; on places we are told that the energy grids are too weak and blackouts, brownouts are likely this summer because of bottlenecks in those grids. We will be focusing later on fuel supply problems, the likes of which we saw in Chicago and Milwaukee last year when fuel supplies were short and energy spikes hit consumers, and

angry consumers wanted to know why and what was going wrong with our supply problems.

We know several things about this country, and one is that we have an insatiable demand for energy, and this new e-economy is a gas guzzler and we have to somehow fit our energy supply with that huge demand.

At the same time, we are going to necessarily balance those concerns against the environmental concerns of our country in maintaining some of the policies we put in place to clean up our air and our water and our land. That is why we put energy and air quality in the same committee. We know that relationship. We know, for example, in California that some plants are operating at 25 percent capacity because they have already bumped up against the NO_x caps. At the same time, emergency generators are running full steam, and those emergency generators using diesel are polluting the air 300 times more than the power plants that have shut down. We need to put some common sense in these decisions.

Mr. Chairman, I want to thank you for accompanying me to California. I think we are going later this month together to actually talk to energy executives and government officials in California to get a firsthand look at that problem.

California represents 12 percent of the Nation's GDP. We can't have a crisis in California that is not a national crisis. We can't have a crisis in energy facing one community, one State in this country, without it becoming a national concern. There are six petrochemical plants shut down in Louisiana because natural gas prices are so high, in an energy world where natural gas is now the premier desired fuel for electric generation. We have got a lot to talk about, a lot to do.

Joe, I want to thank you, Mr. Chairman, for, again, the energy that your committee is going to bring, and you personally are going to bring to this awesome and demanding task. Downstairs, Mr. Bilirakis has started the health care hearings, and we are organizing this afternoon the ONI work of our committee. This committee is back, and we are going to do some remarkable things in this 2-year cycle because of the talent on both sides of the aisle that is just itching to get to these problems and to find solutions for the American public. This is going to be an exciting time for your subcommittee, Mr. Chairman. I thank you for allowing me to come in and interrupt like this. I promise in the future I won't do this to you, but I wanted to come here on the first day and congratulate you for making this the first hearing, because this California situation is something all of us have an interest in and the entire Nation has a stake in resolving.

California, literally, is just the first sign of what could be problems all over America until and unless we make some good decisions. Joe, thanks for entering this process, for helping us find those answers, and I look forward to working with you. You have the full support of the full committee and its staff in this grand effort. Thank you, sir.

[The prepared statement of Hon. W.J. "Billy" Tauzin follows:]

PREPARED STATEMENT OF HON. W.J. "BILLY" TAUZIN, CHAIRMAN, COMMITTEE ON
ENERGY AND COMMERCE

Mr. Chairman: I'd like to commend you for holding this hearing on lessons learned from the California electricity crisis. Over the past year, energy issues have been very much in the news. Since last summer, the situation in California has been getting the most attention, but rising prices for natural gas and oil also give the consumer good cause to worry.

The name of this Committee was changed to Energy and Commerce for a reason: we recognize that energy issues are paramount. The increased demand for energy in the U.S. gives this Congress and the Administration the opportunity and responsibility to develop a comprehensive, forward thinking national energy policy. A long term strategy that includes all sources of energy is essential to the success of our economy. The U.S. demands abundant energy supplies at affordable prices.

This is the first hearing of the Subcommittee on Energy and Air Quality. We intend to hold more hearings in the future on other energy issues. These hearings will focus attention on the need for a comprehensive energy policy and highlight what needs to be done to achieve that goal.

Today's hearing will show that despite the negative publicity about electricity, true competition does not result in power shortages, blackouts, or high prices. This hearing will explore the causes of the crisis and look at other states to identify what they did right.

I look forward to hearing from today's distinguished panel of witnesses. Thank you.

Mr. BARTON. So this is going to be the Energy Bunny Subcommittee of the Energy and Commerce Committee. We are going to work, work, work, work, work, Mr. Chairman. And we hope, produce, produce, produce, produce, produce as well. We welcome your participation.

We want to welcome Mr. Markey for an opening statement. I want the audience to look at your watches and let us see if Mr. Markey can hold his 3-minute opening statement to under 7 minutes.

Mr. MARKEY. Thank you, Mr. Chairman.

Mr. BARTON. I just picked a number.

Mr. MARKEY. Thank you, Mr. Chairman, very much.

I begin here today my 25th year on the Energy Subcommittee. I remember back in the late 1970's, actually, when Senator Scoop Jackson used to hold hearings before the Senate Energy Committee. We didn't have an Energy Committee in the House. We had an Interstate and Foreign Commerce Committee that had energy, health, telecommunications. You all serve on this committee right now.

There was a big move to create a House Energy Committee and to strip the committee of its jurisdiction. I suggested to Mr. Dingell that we make a big move to help solve the problem that we didn't have an energy committee in the House and that we change the name of the committee to the Energy and Commerce Committee, and that would solve the problem, which it did from 1980 until 1995 when, because the energy crisis had kind of abated, the name was changed back to the Commerce Committee.

Beginning this year, we have changed it back again to the Energy and Commerce Committee, dealing with the reality that energy is now playing a much more pronounced role in public policy in our country, but also as an anticipatory, also NMD shield against anyone coming against our jurisdiction in this particular area because, Mr. Chairman, you are going to provide great leadership for us.

Mr. BARTON. I did not realize it was your idea.

Mr. MARKEY. Yes, that was my idea. Coming up with a good line.

Mr. BARTON. Yes.

Mr. MARKEY. You know, my mother always said to me, Mr. Chairman, try to learn as many lessons vicariously as you can. It is safer that way. Now, we always don't do that, but we are here today trying to learn vicariously from the California electricity disaster.

Some of you recall the film *The Perfect Storm*, in which three storm fronts converged off the New England coast to produce monster waves that crashed down and destroyed a small Massachusetts fishing vessel. What we have seen today in California is an electricity perfect storm, in which converging fronts of a flawed State restructuring plan, high natural gas prices, increased demand, lower than expected rainfall, reduced imports of power from neighboring States, lack of new generating capacity, transmission constraints and market structure problems have all come together to produce a monster wave of rolling blackouts and higher prices.

For the citizens of California, it is a crisis that leaves consumers caught in a vortex of reliability problems and looming rate increases. For the rest of us, it is something that we only want to experience vicariously.

Now, we can learn the wrong lessons. President Bush, Secretary of Energy are arguing that we should drill in the pristine Arctic refuge to find more oil. Unfortunately, only 1 percent of electricity in California is generated from oil, and even if we did drill we wouldn't find any oil and have a capacity to bring it to California for at least 10 years; not, I think, the time schedule that this committee wants to work on.

California is one of the main engines of the digital economy and the digital bits, the currency of this information, the economy.

What are they? Simply bundles of electrons. Every single one of the hundreds of millions of devices, PCs, routers, servers, transmitters, and so on have exactly two kinds of connection; one for bits and one for kilowatt-hours.

Just how much electricity does the Internet use? Some estimates are that up to 8 percent of the Nation's electric supply is absorbed by the sprawling and deeply penetrating hardware of the Internet. When the broad array of all the computers and related equipment are considered, the total probably has been estimated to reach 13 percent of all U.S. Electricity consumption.

In fact, in just the past 5 years, our digital economy has driven U.S. Economic growth so much that the increased energy supply needed to meet this growth is equal to the total generating capacity of the country of Italy. Cyberspace clearly has an energy cost, and energy still continues to be the engine for growth.

It is true that the increased efficiencies brought about as the result of telecommunications and information technologies will help us to use energy more efficiently, but the heightened economic growth made possible by the digital era also seems to be driving increased demand for electricity in California, in Massachusetts, and elsewhere around the country.

Put simply, if oil was the fuel that powered economic growth in the 20th century, electricity is the fuel that powers the economic growth in the 21st century digital economy.

So how do we prevent the California catastrophe from becoming the California contagion? How do we create a functional electricity market that can efficiently and inexpensively meet the electricity needs, and do so in an environmentally responsible fashion?

One way to start is to assure that we have a fair and competitive market structure. Last year when this committee was considering Federal electricity restructuring legislation, I tried to offer an amendment that would have helped to reinvent the Federal Energy Regulatory Commission, transforming it from a regulator to a market regulator. My amendment would have given Federal regulators the tools they need in order to address market power abuses in the emerging competitive market.

But there was widespread opposition to my amendment from the electric utility industry and from many members on the other side of the aisle. There is no market power problem, I was told. We should not be giving FERC any more authority in this area. We should leave it to the States.

Well, we ended up doing nothing, and what happened? Last fall an investigation by the FERC staff revealed that the California market was seriously flawed and caused unjust and unreasonable rates for short-term energy to be charged. The FERC also observed that California's energy regime provided an opportunity for sellers, inside and outside of the State, to exercise market power when supply is tight.

Unfortunately, because FERC does not have the type of authority that it should have over market power abuses, it was unable to charge particular sellers with abuses of FERC rules. And as we know, some of California's problems are beyond its own State boundaries, so the State cannot reach those issues. Only if we have a national regime and a national wholesale market can we move to this new era, but we need national regulation, as well, to deal with the national market power abuses.

I know that there are many factors that combined to produce California's perfect storm. Some, like the amount of rainfall on the West Coast, are beyond our control. But when we see evidence of market power abuses that result in excessive and artificial levels of market volatility, it seems to me we should act.

I look forward to the hearing today and the expert witnesses that you have gathered, Mr. Chairman, and I look forward to working with you this year toward the goal of producing national legislation.

[The prepared statement of Hon. Edward J. Markey follows:]

PREPARED STATEMENT OF HON. EDWARD J. MARKEY, A REPRESENTATIVE IN
CONGRESS FROM THE STATE OF MASSACHUSETTS

Thank you, Mr. Chairman.

My Mother always said, "Try to learn as many lessons vicariously as you can. It's safer that way." And that is essentially what we are trying to do here today, trying to learn vicariously from the electricity disaster that has afflicted California.

Some of you may recall the film, "Perfect Storm," in which three storm fronts converged off the New England coast to produce monster waves that crashed down and destroyed a small Massachusetts fishing vessel. What we are seeing today in California is an electricity "Perfect Storm," in which converging fronts of a flawed state restructuring plan, high natural gas prices, increased demand, lower than expected rainfall, reduced imports of power from neighboring states, lack of new generating capacity, transmission constraints, and market structure problems have all come together to produce a monster wave of rolling blackouts and higher prices.

For the citizens of California, it is a crisis that leaves consumers caught in the vortex of reliability problems and looming rate increases. For the rest of us, it is something that we only want to experience vicariously.

California is one of the main engines of the digital economy, and digital bits are the currency of this Information Economy. What are they? Simply bundles of electrons. Every single one of the hundreds of millions of devices, PCs, routers, servers, transmitters and so on, have exactly two kinds of connections: one for bits and one for kilowatt-hours. Just how much electricity does the Internet use?

Some estimate that up to 8% of the nation's electric supply is absorbed by the sprawling and deeply penetrating hardware of the Internet. And when the broader array of all computers and related equipment are considered, in other words the heart of our new Information Economy, the total probably has been estimated to reach 13% of all U.S. electricity consumption.

In fact, in just the past 5 years our digital economy has driven U.S. economic growth so much that the increased energy supply needed to meet this growth is equal to the total generating capacity of Italy. Cyberspace clearly has an energy cost and energy still continues to be the engine for growth. It is true that the increased efficiencies brought about as the result of telecommunications and information technologies will help us use energy more efficiently. But the heightened economic growth made possible in the digital era also seems to be driving increased demand for electricity, in California, and elsewhere around the country.

If oil was the fuel that powered economic growth in the 20th Century, electricity may well be the fuel that powers economic growth in the 21st century.

So, how do we create a competitive and functional electricity market that can efficiently and inexpensively meet the electricity needs, and do so in an environmentally responsible fashion?

Last year, when this Committee was considering federal electricity restructuring legislation, I tried to offer an amendment that would have helped to reinvent FERC from a rate regulator to a market regulator. My amendment would have given federal regulators the tools that they are going to need to address market power abuses in the emerging competitive market. But there was widespread opposition to my amendment from the electric utility industry and from many of the Members on the other side of the aisle. "There is no market power problem," I was told. "We shouldn't be giving FERC any more authority in this area" "We should leave it to the states."

Well, we ended up doing nothing, and what has happened? Last fall, an investigation by the FERC staff revealed that the California market was "seriously flawed and caused... unjust and unreasonable rates for short-term energy" to be charged. The FERC also observed that California's energy regime provided an "opportunity for sellers to exercise market power when supply is tight." Unfortunately, because FERC doesn't have the type of authority that it should have over market power abuses, it was unable to change particular sellers with abuses of FERC rules.

Now, I know that there are many factors that combined to produce California's Perfect Storm. Some, like the amount of rainfall on the West Coast, are beyond our control. But, when we see evidence of market power abuses that result in excessive and artificial levels of market volatility, it seems to me that we should act.

I look forward to hearing the testimony of the witnesses before us today. And I hope, Mr. Chairman, that this will be the first, not the last, of a series of hearings focusing on the California catastrophe.

Mr. BARTON. Thank you. We appreciate your 8-minute and 10-second 3-minute opening statement. We are going to give you style points, but I think Mr. Doyle has substance points on you.

Mr. MARKEY. That is because he agrees with you.

Mr. BARTON. That doesn't hurt. Who does the judging does make a difference, that is true.

We now would like to hear from another of our Californians, Mr. Radanovich. We welcome you to the full committee and the subcommittee.

Mr. RADANOVICH. Thank you, Mr. Chairman.

California rarely gets together on anything because we are such a big and such a large and diverse State.

But in my 6 years of being here, we did manage to come together on one thing, and that is when the State delegation, both Republican and Democrat, came back to Washington, together with the

California delegation here in Congress, to lobby the Fed to keep them out of the current deregulation debate back here at the time because California had such a great plan and the Fed would only screw it up if they got involved.

That is how our plan started. Of course, it has turned out to be not such a terrific plan, and has not worked out very well.

As the only member here, I think, whose district has gone through a rolling blackout, I would really want to stress one thing. That is that in 2½ years, things are going to get very critical. If there is not both Federal and State participation to get us through these 2½ years, I fear that there will be loss of life.

I am a supporter of temporary cost-plus caps that could be had through the FERC, but I don't support those things until the State really does a couple of things.

One is to begin to relax some of the clean air standards, because it is my belief, and I hope that we hear more about that from some of the testimony today, that California can produce 10 percent more of its own energy if that alternative is investigated.

Second, I think the environmental community in California needs to stop using environmental policy to stop growth, because growth both is and has occurred, and until the State collectively pulls its head out of the sand and begins to prepare for its future, rather than ignoring the fact that infrastructure needs to be expanded, both electricity and water, then I think that the Fed ought to wait.

California needs to do a few things, but we cannot get through these 2½ years without Federal help. I really think that temporary assistance, both from the Federal level, and a relaxation of some of these standards, or the assertion of a temporary cap, is no more dangerous than temporarily relaxing some of the State's clean air standards. It does not mean eviscerating the law, it does not mean that at all. It means temporary assistance to a State that has found itself in very dire straits, and it is going to need attention from both the Federal and State governments. Thank you.

Mr. BARTON. Thank you, Congressman. We really look forward to your input, because it is very, very beneficial to have a Congressman whose district is having some of the problems that we are trying to address.

While it is no fun for you in your district, I understand that, the knowledge that you have as a result of it is going to be very beneficial.

Mr. RADANOVICH. Thank you. This summer, Mr. Chairman, it will be statewide. Southern California will be getting it this summer.

Mr. BARTON. We appreciate your participation on the subcommittee.

Mr. WAXMAN. Mr. Chairman?

Mr. BARTON. The gentleman from California.

Mr. WAXMAN. Just so we have the record straight, Chairman Tauzin made a statement, and we respect other people's views, but statements of fact ought to be evaluated. Chairman Tauzin said that plants are running at 25 percent of capacity because of NO_x limits. That is contrary to what we heard from the California Air

Resources Board. I wonder if we could get for the record the information.

Mr. BARTON. Let's get to the opening statements before we start into a debate on other Members' opening statements.

Mr. WAXMAN. He probably has data I don't know about.

Mr. BARTON. We are going to be fact-based, but we will—obviously, whatever data is there from EIA or the California Air Quality Board, the FERC, we will put into the record. There is no question about that.

Mr. WAXMAN. Thank you very much.

Mr. BARTON. We would now like to hear from another veteran of the subcommittee and the full committee, Mr. Bart Gordon. We came to Congress at the same time, and our hair was dark and our bellies were flat and his belly is still flat. Mine is not, nor is my hair dark. Mr. Gordon.

Mr. GORDON. Thank you, Mr. Chairman. Thanks for your leadership here.

We have had some interesting opening statements, but I think it is time to hear from the panel.

Mr. BARTON. Well, thank you, to give us back a little bit of time.

We would like to go to a new member of the subcommittee, not the full committee, Mr. Ganske of Iowa, for an opening statement.

Mr. GANSKE. Thank you, Mr. Chairman.

To Mr. Markey, who speaks about the confluence of factors that created a Perfect Storm, I say, let us Gladiators lay down our swords, Traffic in good will to work together, have a piece of Chocolate with Erin Brockovich, and try to figure out this energy policy.

Mr. Chairman, several of us are juggling simultaneous hearings on energy and prescription drugs. We actually have people on fixed incomes in this country who are trying to decide which bill to pay, their medicine bill or their power bill.

So for this hearing, I think it is important to focus on two separate questions: First, what role should the Federal Government play in assisting California in overcoming its energy problem; second, we should examine California as a case study in restructuring, and determine what went wrong, because clearly, something has gone wrong.

Mr. Chairman, as our committee resumes work on energy issues, I want to reiterate the principles that I think we should keep in mind as we deal with energy—this energy crisis. All retail customers must benefit and be protected in a competitive market. Those companies that have invested in power facilities must be treated with responsibility. We need to ensure that competitors enter the market on an equal footing. We need to clarify any jurisdictional ambiguity that could frustrate a competitive market. We must maintain a safe and reliable electricity system, and we need to protect the environment.

As I see it, there are many contributing factors to the current state of the energy situation in California. One of the factors is the failure of power generation and transmission to keep up with growing power needs in the State.

Current regulations under the Public Utility Holding Company Act clearly deterred the establishment of greater power generating capacity in the State.

It also seems that the 1996 California restructuring changes have violated some basic rules of economics by locking in consumer power rates and allowing the rates the utilities pay for power to rise. It was only a matter of time until the price at which power could be purchased exceeded the amount which could be collected from the customer.

My question is this: Where was the market incentive for conservation of energy? By also preventing long-term contracting for power, another stabilizing factor in the price was removed. Finally, I would also say that I think we are making a mistake if we focus only on what California did wrong. We should look at what other States may have done right.

Mr. Chairman, I hope that the lessons we learn today will help us in our efforts on the Federal level to help create a reliable energy policy. I yield back.

Mr. BARTON. Thank you, Congressman Ganske. We appreciate that opening statement.

We would like to hear from Mr. Barrett, Congressman Barrett, of Wisconsin for an opening statement.

Mr. BARRETT. Thank you, Mr. Chairman. I agree with Bart that we should get on with the hearing, so I will yield back my time.

Mr. BARTON. Thank you.

We go to Mr. Bryant of the great State of Tennessee for an opening statement.

Mr. BRYANT. Thank you, Mr. Chairman. Let me, too, apologize as another one of those members that is doing double duty today with the Health Care Subcommittee also meeting at the same time upstairs on the very important issue of prescription drugs for senior citizens.

I will be quick, like my colleague, Bart Gordon from Tennessee, I think just about everything has already been said. Let me associate myself with a couple of people's remarks, though; with Mr. Doyle, because my chairman said it was such a good statement.

But I do agree with Mr. Doyle's statements, that we have to, as others have said, learn not only from the mistakes of California, but also from a job well done, it appears, from States like Pennsylvania.

Finally, let me associate myself with the remarks of our chairman of the full committee, Mr. Tauzin. What I heard him say, among other things, was we need to focus as a subcommittee and as a full committee and as a Congress on a national energy policy in this country that covers the range not only of this issue but natural gas and a complete energy policy. I hope that we can, in this Congress, join in with the administration in looking at this and not only looking at it, but coming up with a comprehensive energy policy.

With that, I yield back the balance of my time.

Mr. BARTON. I thank the gentleman from Tennessee.

I see no members on the Democrat side that have not been given an opportunity for an opening statement, so we will go to Mr. Pickering of Mississippi for an opening statement.

Mr. PICKERING. Thank you, Mr. Chairman. Let me just say from the committee's perspective, I think that we have done the right thing in the last two Congresses by waiting to see the results of

the experiments in the States. Now we have a greater body of evidence and examples, both good and bad, of what works and what does not work.

Let me say, now is the time for us to develop the comprehensive energy policy that our country so desperately needs. It will have to contain every component, from the reliability of our system to transmission to generation, to regulatory reform, exploration and production, alternative energy sources, and new technologies.

Now is the time to act. We have seen from the States what works and does not. We should take those lessons to heart as we begin working with the new administration, and as Republicans and Democrats, to do the right thing for the country.

Thank you, Mr. Chairman.

Mr. BARTON. Thank you, Mr. Pickering.

Seeing not other members present who have not been given an opportunity to give an opening statement, the Chair would ask unanimous consent that all members not present be given such an opportunity to put an opening statement in the record.

Is there objection?

Hearing none, so ordered.

[The prepared statement of Hon. Christopher Cox follows:]

PREPARED STATEMENT OF HON. CHRISTOPHER COX, A REPRESENTATIVE IN CONGRESS
FROM THE STATE OF CALIFORNIA

Thank you, Mr. Chairman, for holding this hearing today.

In 1996, the California state legislature promised consumers that its electricity restructuring law would result in substantially lower electricity rates. Today, five years later, that law is resulting not in lower rates, but in skyrocketing electricity prices, massive power shortages, rolling blackouts—and media reports of businesses packing up their operations and moving across the border to other states.

California residents and businesses aren't the only ones suffering. The state's electricity shortage is directly affecting neighboring states, as California's current power needs are draining power supplies available to other states that are also part of the Western grid.

As the crisis in California grows—and as we approach the summer time, when energy consumption will grow even higher—the national implications of California's problems loom even larger. Without further reforms, the prospects of continuing energy shortages over the coming months could severely impact continued economic growth in California. And given that California's economy alone accounts for nearly one-sixth of the nation's economy, any slowdown in economic growth in California will have a serious effect on our nation's overall economic and fiscal health.

Learning the lessons of what went wrong in California are vital so that we can take the necessary steps to fix the problems.

For starters, I hope today's hearing will help shatter a myth that continues to persist today: California's 1996 electricity restructuring law, as it has been inaccurately described, did *not* "deregulate" electricity prices. In fact, the California government's attempt to redesign the way Californians can buy and sell electricity has fundamentally failed to allow the free market to function properly. Let me just highlight three of the most significant failings of the 1996 law:

- *Price controls.* As our witnesses will testify today, California's 1996 law only removed government controls on wholesale prices, but continued to heavily regulate retail prices. In fact, the law mandated a 10% *cut* in the existing retail price.
- *A flawed government substitute for market institutions.* California's 1996 law banned all long-term power supply contracts, and instead required incumbent utilities to buy all their wholesale power on the day-ahead spot market through a government-run institution called the Power Exchange. Outlawing long-term contracts removed an important moderating influence on prices, as prices in the spot market are far more volatile. Even worse, because the incumbent utilities must buy all their power from the Power Exchange, this has created opportunities for speculation and incentives for power generators to withhold or reduce power supplies in order to increase the sales price of energy sold to the incum-

bent utilities. The net result is that the utilities were forced to buy high and sell low, an unsustainable development that has now depleted their reserves, destroyed their credit, and left them on the brink of bankruptcy.

- *No real consumer choice.* A competitive market cannot function properly without adequate consumer choice of electricity providers. But in California, five years later, only 2% of residential customers have chosen a different electricity provider. That's because the 1996 restructuring law has proven very unfriendly for competitive new electricity providers who want to enter the retail marketplace. The law's continued price controls have, of course, proven a significant deterrent to new entrants entering the marketplace. In addition, the 1996 law hits every electricity consumer with a costly tax—euphemistically called a “competitive transition charge”—that goes to pay for the stranded costs of the incumbent utilities. This tax is the same no matter which utility you use, so even if you wanted to choose a new entrant—one that has not made significant economically unsound investments in stranded assets—you still have to pay the same large “competitive transition charge” that you would if you had stayed with your incumbent utility. Finally, the 1996 law also contained a significant number of regulatory burdens that discourage true consumer choice, such as the ban on renting the incumbents meters which has meant that customers who change their electricity provider have to pay an up-front fee of about \$600 to have a new meter installed at their home.

Encouraging California to repeal its 1996 law—which has proven a barrier to lower prices and real consumer choice—is critical. California must also be careful to replace the failings of the 1996 law with a free market, and not make matters worse by moving in the direction of more government regulation and control.

On this score, I am concerned by Gov. Davis' talk of having state taxpayers buy the electricity transmission system from the incumbent utilities, and operate it as a state-run enterprise. Given the dire need for new investment in additional transmission and generating capacity in the state, government ownership of the transmission lines will dry up any private interest in building out the additional capacity that our state so desperately needs.

Thank you again for holding this important hearing today, Mr. Chairman. In addressing the problems of providing consumer choice for ratepayers in California, we must not lose sight of the fact that the market can provide a better measure of consumers' needs and demands than the government. I hope that we can keep our eye on the long-term needs of California's electricity consumers, and seek answers that will provide true choice and lower prices for electricity consumers.

Mr. BARTON. We now want to welcome our first panel. We have a distinguished panel. We have a Commissioner from the California Public Utilities Commission, the Chairman of the Ohio Public Utilities Commission, the chairman of the Pennsylvania Public Utilities Commission, and a national leader in the consumer movement, Mr. Travieso, from Maryland.

We are going to start, obviously, since there has been quite a bit of focus on California, with the Commissioner of the California Public Utilities Commission, Mr. Carl Wood.

Welcome to the subcommittee, Commissioner. We are going to put your entire statement in the record. We are going to start you with 7 minutes and see how close you come. If you need additional time, obviously we are going to give you additional time.

Welcome to the subcommittee.

STATEMENTS OF CARL WOOD, COMMISSIONER, CALIFORNIA PUBLIC UTILITIES COMMISSION; JOHN M. QUAIN, CHAIRMAN, PENNSYLVANIA PUBLIC UTILITY COMMISSION; ALAN R. SCHRIER, CHAIRMAN, OHIO PUBLIC UTILITIES COMMISSION; AND MICHAEL J. TRAVIESO, MARYLAND PEOPLE'S COUNSEL

Mr. WOOD. Thank you very much.

Good morning, Chairman Barton, and members of the subcommittee.

I very much appreciate the opportunity to testify before you today on behalf of the California Public Utilities Commission, the PUC, the State of California and our 35 million residents.

Your invitation asked that I focus my remarks on the cause or causes of the electricity disruptions that Californians have been experiencing since June of last year, and those elements particular to the electricity deregulation plan implemented by California's previous administration, which I view as responsible for those disruptions.

As I appear before you today, California marks its 31st day of a continuous Stage 3 energy alert. The three major investor-owned utilities in California are experiencing severe financial difficulties, with vendors and independent generators expressing concerns about whether they will be paid for services rendered.

As the Governor and legislature move aggressively to address these challenges, with plans to increase generation and conservation, and stabilize the financial health of the utilities, I think we can learn much from our painful experience with deregulation.

Fundamentally, I believe the premise that provision of electricity as an essential service could be effectively traded on the day ahead and hour ahead spot markets, absent the full range of generation procurement options, was at the root of the failure of California's deregulation scheme.

The flaws in the system adopted reflect this belief—the pool structure that was established, the accompanying reliance on wholesale trading in lieu of native generation, California's retreat from integrated resource planning, and the unmet promise of customer choice.

A balanced reliance on the mix of generation procurement options available has historically been necessary to maintain reliable, reasonably priced electricity, and it remains so today. Historically, California participated in the western systems coordinating council, or WSCC. The WSCC was a loose pool that permitted coordination and trading of loads and resources in the western States.

During the two decades before deregulation, California's utilities relied on trades and purchases from within the WSCC to fill out their resource needs, in combination with native generation and short- and long-term purchases from qualifying facilities.

For example, San Diego Gas and Electric Company successfully reduced its average electric rates from a high of 12.3 cents per kilowatt-hour in 1985 to about 9 cents per kilowatt-hour in 1991. This was accomplished largely by meeting its energy requirements with a mix of native generation, and trades and purchases. SDG&E met approximately 30 percent of its energy requirements through contracts in 1992.

In contrast, the Federal Energy Regulatory Commission, or FERC, authorized efforts to regionalize the Western Interconnect, and markets have failed to protect consumers. Beggar-thy-neighbor withholding of generation and sales has replaced the regional co-operation that worked for years.

California is now moving to restore a mutually beneficial and co-operative approach. A central mistake of California's deregulation experiment was the divestiture of a large portion of the cost-of-service utility generation plant in our State. Over a 2½ year time-

frame, California's investor-owned utilities sold 18,393 megawatts worth of fossil and renewable generating facilities. These facilities were subject to cost-of-service ratemaking. They now generate power that is sold into the current market at considerably higher prices, I would say spectacularly higher prices.

That market is dysfunctional. Wholesale prices no longer bear any relation to the cost of production, demand, or time of use. The very power the utilities once owned and controlled is now sold on the wholesale market to meet virtually the same demand.

Spot market wholesale trading should be used to meet electricity demand on the margin only as part of a mix of resources relied on to meet requirements. But nothing in California's deregulation experiment limited reliance on the spot market to meet any demand, even including baseload. California is now moving to permanently reduce its reliance and exposure to wholesale markets.

I believe policymakers at the time should have taken a more measured approach to authorizing the divestiture of native generation. It may have been appropriate to authorize divestiture of some amount of utility generating facilities to improve the development of a workably competitive wholesale market and the power exchange.

However, losing the benefit of regulatory control over this portion of California's energy requirements in such a short time period significantly diminished California's ability to minimize price volatility during the uncertain transition period.

California's PUC, our legislature, and Governor Davis are all in agreement that no further divestitures should be authorized, given the current dysfunctional market.

Throughout the 1980's and 1990's, the California Energy Commission and the PUC conducted a joint integrated resource planning process. Future resource needs were forecasted and a mix of demand side management, generation, and purchases were identified to meet those needs.

In 1992, this process resulted in a finding by the PUC that 1,300 megawatts of additional generation should be procured from qualifying facilities through an auction. After receiving bids to provide power it regarded as being too high-priced, Southern California Edison Company appealed to the FERC.

Ultimately, FERC found that the Commission's auction process was flawed and the utilities settled outstanding claims, but the auction process and the building of the new generation facilities was blocked. No additional power was procured through that process, and the PUC determined not to incorporate a State resource planning component into its deregulation experiment.

This retreat from integrated resource planning in California aggravated the problems that stemmed from market uncertainty. The State ignored its energy efficiency building standards during the building boom of the mid-1990's and discouraged the construction of cost-of-service power plants, all in the hope that unregulated investors would build sufficient new generation capacity for predicted future needs.

No warning signals were built into the deregulation experiment to provide policymakers with adequate warning that the market was not delivering sufficient new capacity.

The deregulation experiment also held out the promise that all customers would be able to choose their energy provider. But in reality, this promise was a false choice. Direct access sellers, or energy service providers, set up shop in California and solicited customers, but were not assigned to a duty to serve customers comparable to the obligation borne by traditional utilities.

These providers never penetrated the market to any significant extent, and at the first sign of trouble in the market, they closed their doors and returned their customers to the regulated utilities. The prospect of choosing your energy provider turned out in practice to be little more than a rationale for the unbundling of the distribution utility.

As I said before, I regard the provision of electricity as an essential service. Policymakers concerned about economic stability should assure a reliable, reasonably priced supply of this essential service. The State and the Federal Energy Regulatory Commission have the responsibility and jurisdiction to take corrective actions when, as today, reliability or reasonable prices are compromised. We are taking those actions in California.

Unfortunately, FERC has not exercised its authority under and responsibility under the Federal Power Act to protect consumers from unreasonable rates. FERC recognized last year that the market was dysfunctional and that the wholesale rates being charged were unreasonable, but nonetheless, has failed to act effectively.

In spite of FERC's inaction, California's policymakers are working together to restore reliability and price stability to the market. Again, thank you, Mr. Chairman, for the opportunity to come before you this morning.

[The prepared statement of Carl Wood follows:]

PREPARED STATEMENT OF CARL WOOD, COMMISSIONER, CALIFORNIA PUBLIC UTILITIES COMMISSION

Good morning Mr. Chairman, and members of the Subcommittee. I appreciate the opportunity to testify before you today on behalf of the California Public Utilities Commission (PUC), the State of California and its 35 million energy-consuming residents.

Your invitation asked that I focus my remarks on the cause or causes of the electricity "disruptions" Californians have been experiencing since June 2000 and the elements particular to the electricity deregulation plan implemented by the previous administration which I view as responsible for those disruptions.

As I appear before you today, California marks its 31st day of a continuous Stage 3 energy alert. The 3 major investor-owned utilities are experiencing severe financial difficulties, with vendors and independent generators expressing concerns about whether they will be paid for services rendered. As the Governor and Legislature move aggressively to address these challenges—with plans to increase generation and conservation, and stabilize the financial health of the utilities—I think we can learn much from our painful experience with deregulation.

Fundamentally, I believe the premise that provision of electricity as an essential service could be effectively traded on the day ahead and hour ahead spot markets absent the full range of generation procurement options, was at the root of the failure of California's deregulation scheme. The flaws in the system adopted reflect this belief—the pool structure that was established; the accompanying reliance on wholesale trading in lieu of native generation; California's retreat from integrated resource planning; and the unmet promise of "customer choice." A balanced reliance on the mix of generation procurement options available has historically been necessary to maintain reliable, reasonably priced electricity—and it remains so today.

The Pool

Historically, California participated in the Western Systems Coordinating Council (WSCC). The WSCC was a loose pool that permitted coordination and trading of

loads and resources in the western states. During the two decades before deregulation, California's utilities relied on trades and purchases from within the WSCC to fill out their resource needs, in combination with native generation and short- and long-term purchases from qualifying facilities. For example, San Diego Gas & Electric Company successfully reduced its average electric rates from a high of 12.3¢/kWh in 1985 to about 9¢/kWh in 1991. This was accomplished largely by meeting its energy requirements with a mix of native generation, and trades and purchases. SDG&E met approximately 30% of its energy requirements through contracts in 1992.

In contrast, the Federal Energy Regulatory Commission (FERC)-authorized efforts to regionalize the Western Interconnect and markets have failed to protect consumers. Beggar-thy-neighbor withholding of generation and sales has replaced the regional cooperation that worked for years. California is now moving to restore a mutually beneficial and cooperative approach.

Divestiture and Wholesale Trading

A central mistake of California's deregulation experiment was the divestiture of a large portion of cost-of-service utility generation plant. Over a 2½ year timeframe, California's investor-owned utilities sold 18,393 MW worth of fossil and renewable generating facilities. These facilities were subject to cost-of-service ratemaking. They now generate power that is sold into the current market at considerably higher prices. The market is dysfunctional. Wholesale prices bear no relation to the cost of production, demand or time of use.

The very power the utilities once owned and controlled is now sold on the wholesale market to meet virtually the same demand. Spot market wholesale trading should be used to meet electricity demand on the margin only as part of a mix of resources relied on to meet requirements. But nothing in California's deregulation experiment limited reliance on the spot market to meet any demand, including base-load. California is now moving to permanently reduce its exposure to the wholesale markets.

I believe policy-makers at the time should have taken a more measured approach to authorizing the divestiture of native generation. It may have been appropriate to authorize divestiture of some amount of utility generating facilities to improve the development of a workably competitive wholesale market and the Power Exchange. However, losing the benefit of regulatory control over this portion of California's energy requirements in such a short time period significantly diminished California's ability to minimize price volatility during the uncertain transition period. California's PUC, Legislature, and Governor Davis are all in agreement that no further divestitures should be authorized given the current dysfunctional market.

Retreat from Integrated Resource Planning

Throughout the 1980s and 1990s, the California Energy Commission and the PUC conducted a joint integrated resource planning process. Future resource needs were forecasted and a mix of demand side management, generation, and spot purchases identified to meet those needs. In 1992 this process resulted in a finding by the PUC that 1,300 MW additional generation should be procured from Qualifying Facilities (QFs) through an auction. After receiving bids to provide power it regarded too high, Southern California Edison Company appealed to FERC. Ultimately, FERC found the Commission's auction process flawed and the utilities settled outstanding claims. No additional power was procured through that process, and the PUC determined not to incorporate a state resource planning component into the adopted deregulation experiment.

This retreat from integrated resource planning in California aggravated the problems that stemmed from market uncertainty. The state ignored its energy efficiency building standards during the building boom of the mid-1990s and discouraged the construction of cost-of-service power plants, all in the hope that unregulated investors would build sufficient new generation capacity for predicted future needs. No warning signals were built into the deregulation experiment which provided policy-makers with adequate warning that the market was not providing sufficient new capacity.

The Promise of "Customer Choice"

The deregulation experiment also held out the promise that all customers would be able to choose their energy provider. But in reality, this promise was a false choice.

Direct access sellers, or energy service providers, set up shop in California and solicited customers, but were not assigned a duty to serve customers comparable to the obligation traditional utilities bear. These providers never penetrated the market to any significant extent. At the first sign of trouble in the market, these pro-

viders closed their doors and returned customers to the regulated utilities. The prospect of choosing your energy provider provided little more than a rationale for the unbundling of the distribution utility.

Corrective Actions

As I said before, I regard provision of electricity as an essential service. Policy-makers concerned about economic stability should assure a reliable, reasonably priced supply of this essential service. The state and the Federal Energy Regulatory Commission have the responsibility and jurisdiction to take corrective actions when, as today, reliability or reasonable prices are compromised. We are taking those actions in California.

Unfortunately, FERC has not exercised its authority under the Federal Power Act to protect consumers from unreasonable rates. FERC recognized last year that the market was dysfunctional, and that the wholesale rates being charged were unreasonable. In spite of FERC's inaction, California's policymakers are working together to restore reliability and price stability to the market.

Again, thank you for opportunity to come before you this morning.

California Actions under Governor Davis

- California has dramatically streamlined powerplant permitting and accelerated power plant construction and put a halt to further divestiture of cost-of-service utility generating facilities.
- We have ratcheted up conservation and energy efficiency efforts, spending billions of tax dollars and incentivizing billions more in private investment in generation and energy efficiency.
- We have streamlined interconnection of distributed generation and proposed legislation to remove barriers to bringing clean and renewable distributed generation on line.
- We are prosecuting anti-competitive behavior by generators and marketers.
- We (the PUC) has expanded utility bilateral and forward contracting authority.
- We have provided rate relief to SDGE customers and suspended penalties to interruptible customers experiencing extraordinarily frequent interruptions.
- We are promoting reliability by inspecting generating facilities that are experiencing unplanned outages.
- We (the PUC) has worked to ensure continuing utility financial integrity.

Mr. BARTON. Thank you for that statement. Mr. Doyle would like to introduce our next witness.

Mr. DOYLE. I want to thank Chairman Barton for extending the courtesy to introduce a fellow resident of Pennsylvania, John Quain, Chairman of the Pennsylvania Public Utilities Commission. I am pleased not only that Chairman Barton included Pennsylvania as part of our discussion about electricity deregulation, but that the expertise of Chairman Quain was sought out. I am sure we will all learn a lot due to his contribution to today's proceedings.

Chairman Quain was named Chairman of the PUC Pennsylvania in 1995. Prior to his appointment to the Commission he was a managing partner in the law firm of Tucker Arensburg. At the request of Governor Ridge, Chairman Quain facilitated the development of consensus legislation in the electric and gas industries that led to the introduction of customer choice and utility competition in Pennsylvania.

He is well known for his role in the development and implementation of Pennsylvania's Electric Generation Customer Choice and Competition Act.

Chairman Quain currently serves on both the National Advisory Counsel to the Gas Research Institute and the National Advisory Committee to the Gas Industry Standards Board.

Welcome, Chairman Quain.

Mr. BARTON. Welcome. We will put your statement in the record in its entirety. Mr. Wood took a little more than 8 minutes, and we will give you at least 8 minutes.

STATEMENT OF JOHN M. QUAIN

Mr. QUAIN. I will not take 8 minutes. I will not read my statement. It is not my custom to do it. You have my statement and I know that you have read it. We have talked ahead of time.

Congressman Doyle, thank you for those kind remarks.

We entered into this journey of deregulation back in 1995, late 1995, and the Commission at that time held a hearing to determine whether electric generation, as distinguished from transmission and distribution, ought to be deregulated.

With the conclusion of our investigation, I had the privilege of sitting down with Governor Ridge in July 1996. Pennsylvania's rates were about 15 percent above the national average. That was making us noncompetitive for jobs in the national economy, noncompetitive for manufacturing in the national economy.

But we also had at that time an industry in the electricity market that was safe and reliable, so our challenge was to bring down rates without sacrificing either safety or reliability.

As Congressman Doyle indicated, the Governor asked me to convene a stakeholder group. We decided, with the good will of our General Assembly, not to follow the normal legislative process, but because we were dealing with a fundamental human needs commodity, we had to get the details right. This is a complex area, as everyone has recognized. There are a lot of moving parts all going at the same time.

So we put together a consensus group, a stakeholder group, consisting of 50 different interests sitting around the table; not 50 people, 50 different interests. We actually negotiated every single phrase in the entire dereg bill.

At the conclusion of many months—actually not many months, many hours, over a 3-month period of time—we had a consensus piece of legislation where every stakeholder, save one, the environmental community, who we disagreed with because they wanted portfolio requirement, and our goal was to bring prices down—the entire stakeholder group either did not oppose or supported the deregulation bill.

At that table were low income advocates, consumer advocates, large industrial customers, independent power producers, Senators, Representatives, members from the Governor's office, electric utilities, and the like.

We all moved to the General Assembly. In one night, without amendment, our bill passed. But that was only the beginning of the challenge. We then had to implement it. What our bill provides is for the Public Utility Commission in Pennsylvania actually to implement it.

When we went through the stranded investment issue, as you can expect, with about \$18 billion at issue, we had significant disagreements. As we issued eight separate orders, we followed the same process. For all orders or appeals, we brought back all participants, all litigants, and actually sat down and settled eight in a row. So today in Pennsylvania, there is not a single issue on ap-

peal, either on the legislation or with regard to the eight separate implementation orders for investment rate caps and the like.

As Congressman Doyle said, our goal was to bring down our rates from 15 percent above the national average. Today they are 4.4 percent below.

The news does not stop there. We had over the first 3 years about \$3 billion in savings to all classes of customers, not simply large industrial customers. In 1999, the Philadelphia School District alone saved \$3.6 million. This year the Commonwealth of Pennsylvania saved \$3.1 million. Residential consumers saved somewhere between 10 and 15 percent on a regular basis.

The good news continues. We have seen a growth in projected job growth, about 36,000 jobs by the year 2004, just as a result of deregulation. We have set the marketplace in action which actually encourages new generation to be built within our grid, the PJM interchange. Today about 15,000 megawatts, or about 25 percent increase in generation, is being proposed to be built in the grid over the next 5 years.

We cannot escape the laws of supply and demand. They are necessary to the economy and necessary for a competitive market to work. But my message to this committee today, Mr. Chairman and members of the Committee, is competition can work. It is good, because I don't care what kind of regulator you are, either soft or the most strident, there is simply no substitute for good old-fashioned American competition if you get the fundamentals right.

Our challenge now is to continue that effort. We work on deregulation literally every day. We have over the last 4 years, and we will continue for the foreseeable future, because we are managing this transition from monopoly to competition. It cannot happen overnight, but it can and does provide benefits.

Thank you, Mr. Chairman. I look forward to the questions.

[The prepared statement of John M. Quain follows:]

PREPARED STATEMENT OF JOHN M. QUAIN, CHAIRMAN, PENNSYLVANIA PUBLIC UTILITY COMMISSION

Mr. Chairman, members of the Committee, good morning. Thank you for your kind invitation to appear before you. In the time available to me, I would like to summarize for you the Pennsylvania experience with electricity deregulation. Pennsylvania's story has been a success story.

- As of October 1, 2000, more than 550,000 customers in Pennsylvania were purchasing their power from a competitive supplier.
- Customers across Pennsylvania have saved nearly \$3 billion since the beginning of electric choice in 1997.
- It is anticipated that 36,000 new jobs will be created in Pennsylvania as a result of competition by the end of 2004.
- Approximately 15,000 megawatts (MWs) of generation are projected to come online in the Pennsylvania-New Jersey-Maryland Interconnection (PJM) in the next five years.¹ That represents a 25% increase in regional generation.

When Pennsylvania began electricity competition in 1997, rates were, on average, 15% higher than elsewhere in the United States. Today, Pennsylvanians pay rates, on average, 4.4% lower than elsewhere in the United States. One of the questions that has repeatedly come up in the past weeks and months

is whether the situation now prevailing in the California electric industry will happen in Pennsylvania? I assure you that so long as Pennsylvania continues on its present course, it will not.

¹ If all proposed projects are included, this total could be as high as 46,000 MWs. Many additional projects beyond the 15,000 MWs previously referenced are only proposals, however.

The reliability of our electric system is sound. Retail competition works. Well thought out, collaborative industry restructuring as embodied in the Electric Competition Act passed by the Pennsylvania General Assembly, has assured the maintenance of system reliability and the viability of customer choice.

In preparing my comments for today, I was asked to outline a comparison and contrast of the situations in Pennsylvania versus California.

Both programs tried to reach the same goal of customer choice and electric generation competition. However, there are many differences between our two restructuring efforts and the consequences of those efforts. Following are some of the most fundamental differences:

- Pennsylvania's restructuring law and its implementation were based on collaborative efforts by all participants.
- Pennsylvania started competition with a generation surplus and an adequate, reliable transmission infrastructure, conditions that prevail to this day. Pennsylvania is a net exporter of power.
- PJM, which serves approximately 9.5 million customers, has 57,000 MW of installed capacity whereas CAL-ISO, which serves approximately 10 million customers has 45,000 MW of installed capacity.
- Pennsylvania is the second largest producer of electricity in the US.
- The growth of demand in Pennsylvania over the next five years has been projected at 4%, while PJM regional demand growth is projected at 10%. During the same time period, a conservative estimate is that generation is expected to increase by 25% or 15,000 MW.
- Generation within PJM is based primarily on coal fired units and nuclear units. California's generation is based to a large extent on natural gas and hydro-power imported from the Pacific Northwest. High natural gas costs and falling water supplies have both impacted the price of electricity in California.
- Pennsylvania's utilities have the option of retaining their generation in an affiliate company or of selling that generation.

Pennsylvania's restructuring program and the development of competition has been the beneficiary of ongoing stewardship and careful monitoring by the Governor's Office, the State General Assembly's oversight committees, the Public Utility Commission, the Office of Consumer Advocate, the Office of Small Business Advocate, and by the active participation of all parties with a stake in the evolution of competitive markets. Ongoing oversight must maintain the delicate balance that prevents government intrusion while avoiding government indifference. We want reliability maintained. We want energy markets to work. To achieve those goals, we know that we must be vigilant.

We also understand that while the majority of electricity generation in PJM is coal or nuclear, natural gas does provide 15-20% of peak load, and that the new generation proposed for PJM is almost entirely gas-fired. While our Commission does not have jurisdiction over generator siting or fuel portfolio choices, we are encouraged that the PJM ISO is now considering the long-term impact of fuel choice on proposed generation.

In conclusion, Pennsylvania's utility industry is strong. Our customer choice programs have been a success and are rightly recognized, nationally and even internationally, as models. Through the collaborative process, considered legislation, careful implementation and ongoing stewardship, I am confident that we have avoided and will continue to avoid many of the problems that have beset other states.

I thank you for your attention, and I look forward to your questions.

Mr. BARTON. Thank you, Chairman.

I would like to yield to Congressman Sawyer to introduce our next witness.

Mr. SAWYER. Thank you very much, Mr. Chairman. Ted Strickland and I tossed the coin and I won.

It is a pleasure to welcome Alan Schriber to this panel. He has served as chairman of the Public Utilities Commission of Ohio since 1999, when he was appointed by Governor Bob Taft. It has been an extraordinary time in the very long history of that institutional asset in the State of Ohio.

He also served as a commissioner from 1983 to 1989 under Governor Dick Celeste. He brings a number of assets to his work, but they include a B.S. in economics from the University of Wisconsin

at Madison in 1967, an M.S. In economics at Miami University in 1972, and his doctorate in economics at Indiana University, Bloomington, in 1976.

I would mention, just as an aside, that Chairman Schriber also serves as the chairman of the Ohio Power Siting Board. It is a critical component in the process that Ohio is taking to site new power generation, and I might add, transmission, to prevent the situation that occurred in California from occurring in Ohio, and to do it in a way that is compatible with environmental and public needs and concerns. I am happy to welcome him to our panel today.

Mr. BARTON. Mr. Chairman, your statement is in the record in its entirety. We will give you 8 minutes also, and if you need a little more, a little less, that is fine.

STATEMENT OF ALAN R. SCHRIBER

Mr. SCHRIBER. Thank you very much, Chairman Barton.

Mr. Chairman, members of the Committee, thank you, and the kind words of Congressman Strickland and Congressman Sawyer. That is all I needed was a little more pressure to perform. But I do appreciate it very much.

I am going to take a little bit of a different tack here today, because I think what we want to pursue, at least what I would like to pursue, for the benefit of the Committee, is what we have learned from the experience of California. It is not my mission today to go into a post-mortem of what went wrong. I think we are all pretty much aware of many of the circumstances that led that State to where it is. Of course, I would be happy to answer questions about that later.

I think above all else those of us in States that have been undergoing restructuring, and ours is very recent, we are 6 weeks into it, bear a very heavy responsibility. We have talked about what one State may have done wrong and what other States may have done right. I am not absolutely convinced, and I don't think any of us can be convinced, that what we have done in Ohio, just because it is significantly different from what was done in California, is right, but we hope it is.

I think that brings us to a virtually sacred obligation to be vigilant. Among other things, as time goes on, we have to be very careful. We have to look for early warning signs. We have to be aware of what the market is doing. We have to have capabilities of monitoring the market.

Yes, we all get phone calls of prices have gone this way and that way, and we get lots of consumer complaints. We are alerted to the fact, and we know quite well, that natural gas prices are high, and electricity marketers may be offering different rates at different times.

But equally important and probably more difficult is to monitor the supply side of the market. There are, of course, two sides of this market. When we look at the supply side of the market, again, we are looking for early warning signals of what might go wrong.

Without going into a great amount of detail, for example, the relationship between retail prices and wholesale prices, it is a good signal. Can we monitor loop flows across grids? Can we determine whether there is congestion? Can we determine reliability? Can we

determine whether or not our ancillary services that accompany the generation of electricity and the flow of electricity—can we keep on top of that?

Any combination of these activities could lead us to be very, very concerned where we are going. If that concern does come to fruition, what do we do?

I think each commission, and I think we have the support—I am happy to say that I believe we have the support of the legislature and the Governor's office to really step in when we need to. We need the ability, and we have the ability in our code—we have lots of laws. With the bill that is set up, it gave the Commission the ability to implement our restructuring law, gave the Commission the right, the obligation to step in if need be and take dramatic action where need be. We should not hesitate to do that if we get the wrong signals from the markets, because we do believe that we need to cut anything off at the pass that could be deleterious to our State.

I would also note that the supply of electricity is obviously paramount in everyone's mind. Ohio does have a Power Siting Board, which I chair. Our Power Siting Board, I can't say that every State does, I know a lot of States do not have power siting boards. We have a Power Siting Board with a lot of authority. Not only do we just site the facilities for "public utilities," as defined in the law, but we also site generators, merchant generators who would otherwise not be considered public utilities, interstate transmission lines we site, natural gas pipelines, and the like.

I am happy to say that in the last couple of years, in the last 2 years, since—the last 3 years, since 1998, we have approved 6,000 megawatts to date.

Between last year, the year 2000, and this year, 2001, we will have 2,560 brand new megawatts of electricity on board. We have before us, before the siting board, another 8,000 megawatts pending. These are applications pending before us.

Now, clearly much of that is coal, or rather, natural gas. I am prepared to tell you that we would love nothing more than to entertain some good baseload coal-burning power plants in Ohio. We believe that there is the technology, the clean coal technology at hand. We believe that Ohio, of course, does have the natural resource, and we believe that the baseload coal plants are a necessity because we know that natural gas is going to be used everywhere, in every manner, and that will do nothing to enhance the price of natural gas.

Finally, I need to point out that in my prior iteration as a commissioner, demand side management seemed to have been a catchword that really did catch on at the time. It seemed to have gotten away from us. I think it is something that desperately needs to be revisited.

We do need to look at the demand side. We need to look at conservation. Conservation is accomplished not just through the incentives that are provoked through high prices, but I think we as a government have an obligation to incent and to push very hard for demand side considerations.

With that, I will conclude mine and look forward also to further questions.

[The prepared statement of Alan R. Schriber follows:]

PREPARED STATEMENT OF ALAN R. SCHRIBER, CHAIRMAN, PUBLIC UTILITIES
COMMISSION OF OHIO

SUMMARY

The purpose of the testimony is not to reconstruct the economic disaster that befell the State of California, but rather to illustrate that there is something that we all can take with us as we meander down the same electric restructuring trail.

Nevertheless, it is difficult to ignore some of the missteps that California took because they are at the very essence of the challenges that all states have—or might—take.

In-so-far as the supply of electricity seems to be at the top of the list as an expedited remedy, it helps to have an effective power siting authority. In Ohio, such a board exists to expedite the certification of new power plants and has met with a significant amount of success to date.

While having a substantial amount of generation to serve native load is vital, greater comfort—as well as competition—can only come to fruition with a smooth, efficient transmission system that allows power to move across regions. Unfortunately, the very significant economic issues that govern such a process is not yet in place.

Even with what we think of as an “optimum” restructuring plan, it is imperative that we remain vigilant to any warning signals of impending problems. This involves the utilization of both manpower and data committed to the market monitoring process. With the support of the legislature in electric restructuring, as well as exiting broad authority, it is imperative that the regulatory body step in decisively and quickly to foreclose any potential harm to both the public and the utilities dedicated to serve it.

INTRODUCTION

Mr. Chairman, Members of the Committee, my name is Dr. Alan R. Schriber. I am the Chairman of the Ohio Public Utilities Commission and the Ohio Power Siting Board and am here today to express our views. I would also respectfully request that my written statement be included in today's hearing record.

The Ohio Public Utilities Commission is charged with the duty of regulating the retail rates and services of electric, gas, water and telephone utilities operating within our jurisdiction. We have the obligation under State law to assure the establishment and maintenance of such energy utility services as may be required by the public convenience and necessity, and to ensure that such services are provided at rates and conditions which are just, reasonable and nondiscriminatory for all consumers.

I greatly appreciate the opportunity to appear on behalf of the Ohio Public Utilities Commission before the House Energy and Power Subcommittee. I would also like to commend the Chairman for holding this hearing to examine the issues regarding the problems being faced by the State of California and the efforts of the State of Ohio to avoid a similar crisis as it implements competitive retail electric service.

WHY OHIO IS DIFFERENT THAN CALIFORNIA

At the outset it's important to note that my testimony is not intended as a post-mortem on what went wrong in the state of California. I have attended numerous conferences and have read many articles, as you too undoubtedly have, that have told us about the catastrophic events that befell the State of California. Nevertheless it's illustrative to contrast some of the more pertinent components of California's experience to those of our own state in order that we avoid the same outcome.

Ohio for example, did not force dissolution of generation by its utilities. This led us to impose retail price caps through a market development period with the knowledge and comfort that wholesale prices are not so critical; Ohio Utilities are capable of fulfilling native load demands with their own generation. There is a down side to this, however, in so far as it represents an opportunity cost to the utility companies who would otherwise be selling off-system into a more lucrative market. Additionally, as wholesale prices rise, competition is thwarted even though the Ohio Commission has the statutory authority to incent “shopping” through the imposition of shopping credits.

Finally Ohio has a very aggressive power siting board that I also chair, as well as a transmission system which, while far from perfect, is nevertheless superior to

that in the western states. Ohio is in no great hurry; we are willing to learn as we go. This is precisely why we have a true market development period of up to five years in most cases; a period during which we believe the transition to a truly competitive generation market can be achieved. Nevertheless, as discussed further on, we need to be alert to system discrepancies and failures. The Ohio Commission has been endowed with broad authority to impose fixes wherever necessary, actions that we will not hesitate to take if need be.

Much of this authority has been conferred upon us by Ohio's state legislature through the passage of electric restructuring legislation (S.B. 3) in 1999.

OHIO'S RESTRUCTURING LEGISLATION

Ohio's experience in restructuring our electric utility marketplace has been one in which legislative and regulatory leaders have sought to learn from the experiences of others. Our state analyzed legislation, policies, and practices from a variety of states and watched closely as market began to unfold; first in California, and later in other states like Massachusetts and Pennsylvania. This information was carefully digested and used to craft what we believe to be an effective electric energy policy.

Ohio's restructuring legislation, (SB 3) established a policy for the state to begin competitive retail electric service on January 1, 2001. Among other things, it provides for:

- The availability of adequate, reliable, safe, efficient, nondiscriminatory and reasonably priced retail electric service,
- The availability of comparable price, terms, conditions, and quality options for election by the consumers to meet their needs,
- Diversity of supplies and suppliers, including encouraging the development of distributed generation and small generation facilities,
- Innovation and market access for cost-effective supply- and demand-side retail electric service,
- And finally, ensuring electric retail service consumers protection against unreasonable sales practices, market deficiencies, and market power.

These policies serve as the cornerstone for the state's restructured electric marketplace and are important guidelines for the future of our restructured market.

POWER SITING

The Ohio Power Siting Board was originally created in 1972 and consists of the following members: the Chairman of the PUCO, who also serves as Chairman of the Board; the Director of Environmental Protection; the Director of Health; the Director of Development; the Director of Agriculture; the Director of Natural Resources; and an engineer representing the public who is appointed by the Governor from a list of three engineers provided by the Ohio Consumers' Counsel. In addition, the Board includes four legislative members who serve in a non-voting capacity.

The Ohio Power Siting Board reviews, evaluates and approves the siting of "major" electric generating plants and major electric or natural gas transmission lines. The definition of a major utility facility is a generating plant of 50 megawatts or more, an electric transmission line of 125 kilovolts or more, and a gas or natural gas transmission line capable of transporting gas at more than 125 pounds per square inch of pressure. In order to receive approval as a major utility, an entity must apply for and obtain a certificate of environmental compatibility and public need. Issuance of the certificate depends on the need for the facility and the minimization of potential environmental harm.

An advantage to this process is its jurisdictional trigger. While many states have a siting process their authority applies only if a "public utility" is building a facility. In Ohio, our authority is dictated by the size of the facility, regardless of who is the builder. Therefore, new entrants and independent power producers can take advantage of our streamlined process, just as a traditional utility can.

The Board has several statutory criteria that must be met prior to the issuance of a certificate. Those criteria include: the need for the facility; the probable environmental impact of the proposed facility; whether the facility represents the minimum adverse environmental impact considering the technology that is available and the nature and economics of the various alternatives; that the facility is consistent with regional plans for expansion of the electric power grid of the electric systems serving Ohio and interconnected systems, and that the facility will serve the interest of electric system economy and reliability; the facility will comply with all air and water pollution control and solid waste disposal laws and regulation; the facility will serve the public interest, convenience and necessity; the facility's impact on agricultural

lands; and, that the facility incorporates maximum feasible water conservation practices.

Ohio has a very efficient and effective siting process that has invited new entrants into the market. The process provides for public participation, both formal and informal, affords legal and technical scrutiny and still commands timely decision making. Having a due process that invites public participation has enabled development in our state. Other states do not have processes that are as streamlined as Ohio's. Consequently, delays and slow progress toward siting new facilities has been a problem.

Ohio has also encouraged a healthy portfolio mix. Many states are only building gas-fired peaking units. Although a majority of the generation capacity additions in Ohio have been gas fired peakers we also had some gas-fired base load plants, a coal gasification (high sulfur coal and municipal waste) plant under consideration, and a compressed air storage facility. In addition, one of the largest biomass plants in the country utilizing 100% waste wood fuel, and some coal base load units have also been discussed as potential additions.

INTERSTATE TRANSMISSION: REGIONAL TRANSMISSION ORGANIZATIONS (RTOS)

While Ohio is comfortable with expected electric generation and transmission additions, it is difficult to know what will happen with the market. A state cannot afford to waste valuable and scarce resources as well as limited sites. Consequently, regional needs must be determined (i.e. transmission vs. generation; base load vs. peaker, coal/nuclear vs. gas-fired, biomass and or distributed generation opportunities) and only an integrated regional strategy will accomplish this.

While additional generation capacity will go a long way toward helping to foster a competitive market in the Midwest, we do have our problems. The development of a much-needed regional transmission system has been extremely slow.

Thus far, the Federal Energy Regulatory Commission (FERC) has relied totally upon a voluntary approach to the development of a regional transmission entity. Under this approach, utilities would be allowed to turn over control of transmission facilities and functions to a third party. This new entity would then be allowed to run the combined system as one regional transmission unit. Although the FERC has laid out requirements and guidelines for the formation of such an entity, their efforts thus far have been insufficient and have failed to provide the necessary guidance on this matter.

States like Ohio continue to look to the FERC for an action agenda that simply has not materialized. We believe that FERC must become more engaged, although we recognize that they are currently operating below their statutory compliment of members. However, more should and could be done. Because this has not been the case, numerous states in the Midwest have banded together to create initiatives that would facilitate the solutions to these problems and begin to move electricity throughout our region.

Until such efforts can come into fruition, a number of barriers to transmission remain. For instance within the state of Ohio three separate entities are seeking to develop regional transmission organizations (Midwest Independent System Operator, Alliance Regional Transmission Entity and PJM-West). With three different entities pursuing their own structure and system, "seams" that inhibit the flow of electricity and market choices for Ohioans are likely to develop. We are very concerned about the development of such "seams" both in Ohio and in our region.

Our markets for electricity are becoming more regional in their scope and effect with the onset of retail competition. Concurrent with this change has been increasing discussion and contemplation regarding the issue of jurisdiction over transmission facilities and pricing. With the growth of retail competition has come an expectation that states will surrender jurisdiction over retail transmission. This has caused much concern in states where competition has been implemented as well as those that have opted for the status quo.

Historically, states have had the authority to site facilities. They possess the unique local knowledge and skills essential to ensure the timely development of new facilities. Furthermore, they are in the best position to work with their regional neighbors to effectively and efficiently implement facilities that will avoid everyday local problems. State and local officials are also the first line of contact when constituents have problems or concerns related to these proposals.

EARLY WARNING SIGNS

How does a regulator or a legislator detect problems in the marketplace and what are the early warning signs that indicate a problem exists? This is not an easy question to answer but it is vital to the operation of the industry in a competitive utility marketplace.

A wide-variety of market concentration indicators can be employed to measure and calculate what is happening in the market. Every day accountants, economists and other industry experts employ a variety of tools such as indexes and empirical or econometric analyses to extract and calculate the health of emerging electric markets. Comparisons using statistical analysis are conducted to determine what conditions exist and where future problems may arise. Complex models are even being developed to simulate future problems and potential solutions. However, as utility markets become more competitive and these industries move further from the oversight and regulation of utility commissions, the ability to obtain this data becomes increasingly difficult.

Regulatory commissions that once depended upon data requests and subpoenas to obtain information are finding that they must utilize market data and various other sources to obtain information. Consequently, it becomes essential that a more diverse stable of market indicators be employed. These include the constant, real-time monitoring of prices and commodity trading taking place in the marketplace as well as a host of other techniques that seek to obtain information in as rapid a manner as possible.

Another important function involves the development of comprehensive systems to monitor and track the flow of electricity over regional transmission systems. If early warning programs are implemented to identify and correct constraints and bottlenecks future problems can be averted in advance.

Furthermore, states must look closely at both current and future supplies as they relate to current and future demand. More than ever, states must be proactive in the siting of new generation facilities and not simply react when supplies get low. Staying ahead of the curve will be essential to avoiding problems.

Other early warning signs will come from consumers themselves. In the past, utilities were regulated on the front end and problems were avoided through burdensome regulatory proceedings. Today, these regulatory proceedings have been replaced by restructured, streamlined systems. Consequently, states are now faced with reacting to problems that arise later in the process and must solve them in an efficient manner. By monitoring the types, number and range of complaints being lodged with public utilities commissions, states can obtain a snapshot of what is happening in the marketplace and utilize this information to determine and correct potential problems.

The National Regulatory Research Institute sums the issue of early warning signs up best in their 1999 Market Analyses of Public Utilities paper. They write:

“Organizationally, commissions can use the consumer complaint function, not only to resolve individual complaints, but also to detect patterns of internal market failure and market misconduct. At the same time, a market performance division would examine market structure issues. By examining such industry-specific information together, a commission can conduct a more complete and dynamic market analysis that identifies industry-specific problems. Once identified, the commission can address these problems and set policies that promote meaningful customer choice...”

In the end, states must make every effort possible to proactively address problems in the most effective and efficient manner possible. New skills, technology and techniques will be valuable assets for monitoring the developing market to ensure that competition develops.

POWERS OF THE OHIO COMMISSION TO “STEP IN:”

To preclude a reoccurrence of what happened in California, states need to have the ability to move as expeditiously as possible to address potential problems. Ohio's electric restructuring legislation (S.B. 3), as well as other statutory requirements recognize this important fact.

S.B. 3 provides consumer protection by overseeing electric utility restructuring while at the same time providing shopping opportunities to all customer classes. Among other things, PUCO jurisdiction over electric utility companies and competitive retail electric service providers includes the following:

- Commission authority to monitor retail electric competition in the state and, if the Commission determines that there is a decline or loss of effective competition of a declared competitive service, the Commission shall ensure that that service is provided at compensatory, fair, and nondiscriminatory prices and terms and conditions
- Further, if the Commission finds that an electric utility has engaged in abuse of market power, the Commission, after an opportunity for hearing, may take such measures within a transmission constrained area in the utility's certified terri-

tory as are necessary to ensure that retail electric generation service is provided at reasonable rates within that area.

- Competitive and noncompetitive retail electric services are subject to State authority regarding energy emergencies.
- The Commission has the authority to suspend or rescind certification of competitive retail electric service (CRES) providers for anti-competitive, unfair, or unconscionable practices.
- Complaints can be filed, or the Commission can initiate an investigation, concerning the electric utility's or CRES provider's compliance with Commission rules or Ohio laws.
- The Commission has the jurisdiction to determine if the electric utility is in compliance with its electric restructuring plan.
- An electric utility's Market Development Period (MDP) can not end sooner than 12/31/05 unless the utility files a request for early determination of the MDP upon a showing that effective competition exists or 20% of a customer load class has switched. Requires Commission approval.

In addition to the powers granted under Ohio's electric restructuring legislation, the Ohio Commission has a number of other important roles under the laws of the state. For instance, the Commission has general supervision over all public utilities within its jurisdiction. The Commission may examine such public utilities as to their general condition, capitalization, franchises, and as to the manner in which their properties are leased, operated and managed.

The Commission has rules that define various foreseen types and levels of energy emergency conditions for critical shortages or interruptions in the supply of certain utility services, including electricity. The Governor also has the power to take various actions to alleviate the shortage or interruption of utility services.

Furthermore, when the Commission deems it necessary to prevent injury to the business or interests of the public or to any public utility in case of emergency, the Commission may temporarily alter, amend, or, with the consent of the public utility concerned, suspend any existing rate. Rates set by the Commission apply to one or more public utilities in the state and remain in force for as long as the Commission prescribes.

Finally, the Commission has jurisdiction to conduct complaint proceedings against a public utility as to any matter affecting the rates, charges or the service provided by the that utility.

DEMAND-SIDE MANAGEMENT AND ENERGY EFFICIENCY

I would be remiss if I did not mention the importance of the 1980's watchword, "demand-side management." In Ohio, the framers of S.B. 3 included a provision for an Energy Efficiency Revolving Loan Fund, to be included in all customer class rates as a temporary non-bypassable wires charge on distribution service. It is administered by the Director of the Ohio Department of Development, after consultation with a newly created Public Benefits Advisory Board. The moneys in the revolving loan fund are to be used for financial assistance for investments in products, technologies or services, including energy efficiency for low-income housing, and for residential, small commercial, small industrial/business, local government, educational institutions or agricultural customers. (Section 4928.61 and 4928.62, Revised Code)

In addition, S.B. 3 also continued the work of the Department of Development in its energy efficiency and weatherization programs targeted for the high energy cost, high-volume use structures occupied by low-income customers eligible for participation in Ohio's energy assistance "percentage of income payment plan" program. The goal of this low-income energy efficiency and weatherization program is to reduce the energy bills of the occupants. Participants must meet Federal low-income guidelines and is funded by a State Universal Service Fund rider established as a non-bypassable wires charge on electric distribution service.

CONCLUSION

We have come a long way since California took the first bold steps to open their retail market to competition. Many lessons have been learned but much hard work remains. States must be vigilant in monitoring their markets, protecting the interests of their constituents and working cooperatively to ensure that competition is successful. With that in mind, I would again like to thank you for the opportunity to testify before you today and would be happy to answer any questions you might have.

Mr. BARTON. Thank you, Mr. Chairman.

We now want to hear from Mike Travieso. He is the People's Counsel for the State of Maryland. He is also the Secretary for the National Association of State Utility Consumer Advocates, on whose behalf he is testifying today. Congressman Wynn of your State was very helpful in allowing and helping us communicate with you to get your attendance. We welcome you here.

STATEMENT OF MICHAEL J. TRAVIESO

Mr. TRAVIESO. Thank you very much, Chairman Barton, Congressman Boucher, Congressman Wynn, members of the committee. I am Mike Travieso.

Mr. BARTON. Mr. Wynn, would you like to further introduce Mr. Travieso?

Mr. WYNN. Thank you, Mr. Chairman. I am anxious to hear his testimony. Thank you for coming.

I want to make the comment that Maryland has a very thoughtful and successful experience with deregulation. I think he will add greatly to our storehouse of knowledge. With that, thank you for coming.

Mr. TRAVIESO. Thank you very much.

I am Mike Travieso. I am here on behalf of NASUCA. I am not from the great State of Pennsylvania, but I am from the great State of Maryland.

We have had a similar experience as Pennsylvania in the way we deregulated. First, I would like to take us back a little bit in time to the 1994-1995 era in California to listen to the promises that were made then to the customers of the utilities as to the benefits of retail competition and the wisdom of the market structure that they had set up.

One thing that is important to remember is that this structure was designed by the participants. The utilities were involved in the design. The suppliers, the generators, were involved in the design. But there was very little involvement on behalf of small consumers and residential customers.

I represent them. My job is to represent all the small consumers and the residential customers in the State of Maryland. NASUCA as an organization is made up of 42 agencies like mine whose job it is to represent small customers and residential customers. So our perspective I think is a little different than the perspectives that you may have heard or you may hear from the next panel.

Back in 1994-1995, there were promises made to all consumers, including residential customers, that the rates would go down as a result of competition. These promises have actually been made in virtually every State that has deregulated. The theory is that competition will squeeze out inefficiencies and will produce lower prices; that a competitive market is better than a regulated one in terms of providing these kinds of benefits.

The two agencies that are members of NASUCA in California, our agency in northern California and UCAN, our agency in southern California, were opponents of the deregulation bill in 1995, and they pointed out that there were some serious problems with the way the market was designed back then.

I guess one message I would have to the members of the committee is, in your deliberations, please pay attention and give some

weight to what the consumer advocates are saying, and what they are saying in connection with policy issues and economic issues, because we have a tremendous amount of experience. We have consultants and we have done a lot of work. Of course, we have been the victims of a flawed plan in California.

A little bit on the point of electricity as an essential quantity or an essential item that is necessary for all residential customers, in fact, for all businesses. Electricity is a little different than a lot of other commodities. It has to be looked at a little differently when you are considering deregulation, because it cannot be stored, because it is an essential quantity, it is an essential item. Economists will say that demand is inelastic, so when there are problems with the supply and demand issues with respect to electricity, the consequences are far more severe because there are fewer opportunities available to consumers.

We would hope that this committee and Congress in general would focus on the wholesale markets. Many of the States have already set in place retail deregulation plans, as has Maryland, and I think we would agree that the laboratory for those plans and the experience should be gained at the State level, but we would certainly urge that Congress consider the best way to deal with the wholesale market and use some of the experiences from California to formulate your policies.

We think there are a number of flaws in the design of the California market. I think Carl Wood has pointed out a number of them. I would only point to the fact that there were some mistakes made in the estimates of supply that would be available to serve the market, looking toward the future, and would refer again to the plants that were canceled, that were not built, not because of any constraint, any problem with permitting or anything else. They were just canceled.

I would point out, as well, that there was a large overestimation of the amount of energy that would be saved through demand side management programs. The planners relied on the utilities to put these programs in place. They were counted as reducing the demand, but when push came to shove, the utilities discontinued these programs, and therefore, energy was not conserved, and that obviously increased the demand.

So there needs to be consideration given to what the actual supply will be and what the demands will be, and the planners need to take a very clear look at energy growth and at things like conservation.

A major flaw affecting California also was the prevention of the utilities, for example, from entering into long-term power contracts which would allow them to meet their retail obligations.

Maryland has price caps, Pennsylvania has price caps, virtually every State, I think, that has deregulated has retail price caps. The reason for that is that advocates have asked for them. We don't really see necessarily that small customers are going to gain a benefit through electric deregulation. Therefore, most advocates have urged that prices be stabilized during the transition period, and also be reduced. This has happened in many States.

I don't think the flaw in California is that there were price caps. I think the flaw is that there was a wholesale market that didn't

operate properly, and the concept of price signals really would be inapplicable under those circumstances because sending a retail customer a 22-cent per kilowatt-hour price signal is not valid, since 22 cents does not represent a valid price.

So I certainly wouldn't agree with the concept that retail rates can't be capped, and the reason for that is that, for example, in Maryland, we have permitted our utilities to retain their assets and to enter into long-term contracts, and they have done so. So they can hedge. They can have 4-year contracts at a price that will allow them to meet their retail obligations, and we have done that in Maryland. That is one of the things that we have done.

I would urge the Congress to empower the FERC to do a number of things that they don't currently do. The reason for that is that I think, as I have said before, energy markets, wholesale energy markets, are a far different animal than lots of other markets. They lend themselves to market power abuse. I think there is a substantial amount of evidence that indicates that there was market power abuse in California. You have hourly markets and you have the suppliers with enough information to withhold energy, withhold their production until the prices go way up, and they can make more money doing that than they can selling at the hour prices.

So it is a serious problem. I think there is evidence of that in California. We would urge Congress to allow FERC

to—not to diminish their responsibilities, but to—I think we agree with Chairman Markes to give them the authority to deal with market power abuses, to protect the small consumers against price volatility in the wholesale market; to take the public interest into account.

I think markets take private interests into account because that is what they are supposed to do. They have stockholders, and their obligations are to maximize their profits. But in the electricity business, at least from the retail consumer standpoint, there are things that markets do not necessarily respond to. One of them is conservation, demand side management, renewables, low income issues.

There are a lot of things that are extraneous to markets, and markets don't necessarily work with respect to those kinds of issues.

So our message is to pay attention to the wholesale market, to give FERC the market monitoring authority that they need, and to give them authority to require the formation of RTOs, ISOs, and to own the transmission lines independently; to establish the boards of these organizations without the interested parties controlling them; and to make sure that there is some benefit somehow for small customers, and that we don't end up paying for mistakes like we are doing in California and some parts of New York, and we may well do in other places.

Thank you, Mr. Chairman.

[The prepared statement of Michael J. Travieso follows:]

PREPARED STATEMENT OF MIKE TRAVIESO, PEOPLE'S COUNSEL, STATE OF MARYLAND

My name is Mike Travieso. I am the People's Counsel of the State of Maryland. I also serve as Secretary of the National Association of State Utility Consumer Advocates (NASUCA), on whose behalf I am testifying today.

NASUCA is an organization of 42 state utility consumer advocate offices from 39 states and the District of Columbia, charged by their respective state statutes with representing utility consumers before state and federal utility commissions and before state and federal courts. For the most part, consumer advocates represent residential and small commercial consumers. As a result, NASUCA members are intricately involved in electric utility restructuring debates in their respective states, and—through NASUCA—in Washington as well. NASUCA greatly appreciates the opportunity to testify at this legislative hearing.

I. INTRODUCTION

First, I would like to commend Chairman Barton, the members of the Committee, and your staffs for your consistent recognition throughout your careful deliberations that it is the impact of your actions on consumers of electricity that is of paramount importance. NASUCA truly appreciates your continuing efforts seek out the views of consumers and consumer representatives. We look forward to continuing to work with you in developing policies and legislation that benefit all consumers and complement what many states have already chosen to do.

As this Committee proceeds with consideration of restructuring legislation, NASUCA is confident that you will continue to keep the interests of consumers foremost in your mind. Electricity is an essential component of modern life. The actions taken by this Committee—and ultimately the Congress—will have a profound effect not only on electric consumers, but on the future of the nation as a whole. Therefore, NASUCA urges

Congress to adopt those policies and principles that are fair and benefit all electric consumers. We will have accomplished very little if the end result of our labors is to bring competitive benefits to only a small segment of the electricity market, while rendering basic service less affordable and less reliable for all other Americans.

I also want to commend you for holding this hearing specifically on the California energy crisis. I think we can learn much from our friends on the West Coast. While it is interesting to compare and contrast the retail schemes in California to other states such as Maryland or Pennsylvania, I want to take the few minutes I have before you today to talk about wholesale markets. The fact is that each state retail plan will differ to accommodate the particular needs of its own, but the need for a federal role to assure a vibrant wholesale market remains constant. The reality is that retail competition will fail unless there is a vigorous wholesale market. The truth is that Congress will and should have little to say about a state's retail market, but it is ultimately your responsibility to insure that the wholesale markets work. They don't in California, and, for the most part, do on the East Coast within PJM. However, even the PJM wholesale market has some shortcomings. I would like to take the next few minutes discussing these and finish with a few suggestions on what you can do to help.

II. CALIFORNIA

What went wrong in California? By now you may have heard the answer to this question from a number of other witnesses. Therefore, I will try to be brief and specific on the problems which NASUCA members in California have identified.

1. California relied on inaccurate estimates of future supply and reserve capacity in 1996 when it deregulated.
2. California relied on inaccurate projections of demand-side management acquisitions by its investor owned utilities post 1996.
3. California relied on capacity from out-of-state generators which was not under any contractual obligation to the California market.
4. California required that utilities which had retail price guarantees with their customers purchase all of their power from the California Power Exchange. Much of this power was purchased on the spot market and utilities were either not allowed or not encouraged to enter into forward, long-term power purchase agreements to hedge their future retail obligations.
5. The Power Exchange was separated from the California Independent System Operator and the two organizations did not routinely share data. The operation of the California wholesale market was unnecessary complex and provided an opportunity for generators to maximize profit by artificially creating emergency situations, leading to extraordinary prices.
6. The California PX and ISO were entities created and designed by parties with vested economic interests. They were brand new in 1998.
7. There was not an efficient, pre-existing wholesale market operating in California prior to 1996.

8. California does not have a capacity market.

III. PJM

Could what happened in California happen in Maryland? There are no guarantees when markets are deregulated but Maryland, as a member of the PJM ISO has the benefit of a wholesale market that is better designed and operated. Also, the PJM wholesale market better reflects the results which would occur in a workable competitive market. What are the differences?

1. PJM has been in existence for many years. It is a regional wholesale market and system which includes Pennsylvania, New Jersey, Maryland, Delaware and the District of Columbia. It functions as an ISO and power exchange. PJM has control of the transmission lines; a set of market rules requiring each load serving entity to have a reserve capacity commitment; an independent board; and it operates both an energy and capacity market.
2. Because the PJM wholesale market is established and stable, it appears to be able to attract investment in new generation sufficient to meet expected future demand.
3. Generators, load serving entities, marketers and retail customers can arrange for bi-lateral contracts and do not have to buy power/sell power through the spot market.
4. PJM has an internal planning process designed to identify market flaws and to remedy them. Customers are active participants.
5. About 2500 MW's of new plant is under construction in the PJM region and much more is waiting PJM evaluation, although there is no guarantee that any of these units will actually be built.
6. In Maryland, while we have retail price freezes like in California, the utilities were able to retain their assets or arrange for long-term power purchase agreements to meet these future obligations.
7. In Maryland, when the price freezes end, customers who have not switched to a new provider will not face spot market prices. Instead each utility's load at that time will be subject to an RFP process so that if the wholesale market is competitive, suppliers will submit bids producing reasonable prices.

IV. CONGRESSIONAL ACTION

What can Congress do to protect consumers and to insure that truly competitive wholesale markets develop? NASUCA believes that the key to future reliability, as well as to reasonable retail prices, is a vigorously competitive wholesale market. If the wholesale market is subject to easy manipulation, insufficient market power monitoring and little or no investigation of market abuses and no strong enforcement actions, the retail market will fail.

Steve Ward, NASUCA President testified last year before the Senate Energy and Nature Committee on the importance of giving FERC specific authority relating to market power:

1. The authority to monitor wholesale markets;
2. The authority to eliminate undue concentrations of market power in any relevant market;
3. The authority to remedy anti-competitive conduct or the abuse of market power by any player, including the authority to administer both behavioral and structural remedies. Market participants must have a lot to loose if they are caught engaging in market abuses.
4. FERC needs the authority to require the creation of independent ISO's which all transmission owners must join. FERC must have the authority to investigate and remedy practices which give an unfair advantage to affiliates of transmission owning companies.
5. FERC must be able to assure reliability of electric supply throughout the United States. Federal legislation ought to give states a prominent role in assuring that consumers have an adequate and reliable source of power within their borders.
6. Encouragement should be given to the development of load shifting and load management programs which are designed to reduce peak demands. One way to do this is to foster a demand side market which allows demand-side resources to be bid against supply side resources.
7. Efforts to continue with the research and development of renewable energy resources should be continued and expanded. Reliance on natural gas alone for new plants is dangerous, as we have seen from the doubling of the price of natural gas over the last ten months.
8. NASUCA does not believe that this is the appropriate time to repeal the Public Utility Holding Company Act or to remove FERC merger review authority.

V. CONCLUSION

Deregulation does not necessarily lead to vigorous competition. In fact, NASUCA believes that truly competitive wholesale markets cannot develop without effective controls on those who are in a position to distort the market. It remains to be seen whether electric deregulation will produce the consumer benefits promised by those who championed it. Certainly in California and some parts of New York State it seems to have produced just the opposite of what was promised, customer savings. Maryland's residential customers are concerned about what will happen when the price freezes are lifted. Some problems exist in the PJM market, like the practice of "delisting" (withdrawing capacity and energy from the market). Current prices in the energy and capacity markets do not reflect actual marginal costs. Current PJM market prices seem to indicate that residential customers may not see any savings, but the proof will arrive in July, 2004 when the market will begin to serve PEPCO's Maryland customers.

Thank you for the opportunity to present these comments.

Mr. BARTON. Thank you.

We are now going to go to the question period. I have consulted with Congressman Boucher, and we are going to have one round of questioning for this panel, but we are going to have a little extra time. Instead of a 5-minute round per member, let us put set the clock at 7 minutes. We will be liberal in the use of the 7-minute rule, but we have another panel and a number of members present, so we are going to try to do one round and give each member 7 minutes.

The Chair would recognize himself for the first question.

This is not a hearing to just jump on California. That is why we have Pennsylvania, Ohio, and some consumer representatives. But we do need to compare.

The first thing that I would like to get in the record from California, Pennsylvania, and Ohio, is what your baseload equation is, what your supply equation is, and also peak supply, peak demand for each of the States.

Could we start with you, Commissioner Wood? Could you tell us what the baseload supply generation capacity is in California and what the demand—baseload demand is, generally?

Mr. WOOD. I am afraid I don't have those numbers off the top of my head. The generation resources in California tend to be structured a little differently from some other States, from what I can tell, and most of the resources or many of the resources don't conveniently sort themselves also out into baseload, load following, and peaking units.

Mr. BARTON. Let me hit it another way.

Mr. WOOD. Yes.

Mr. BARTON. Again, we simply have to get some sort of a fact basis in the record.

Correct me if I'm wrong on California, that your general generation capacity on a daily basis is about 38,000 megawatts, is that right?

Mr. WOOD. That is a pretty typical figure, although there are extreme seasonal swings as well as time of day swings.

Mr. BARTON. Your demand is 45,000 megawatts?

Mr. WOOD. That is what the peak looks like. That is the outside of high demand, 45, maybe as high as 48,000.

Mr. BARTON. Okay. Commissioner Quain or Chairman Quain, can you give us what the situation is?

Mr. QUAIN. You saw me checking the numbers myself. I don't generally look at them on a State basis, we generally look at them on a grid basis, but I have both.

Pennsylvania is a net exporter, generally. We have in Pennsylvania about 30,000 megawatts. The peak is just a little under that on a stand-alone basis, but we look at both on a grid basis, and the numbers there, Mr. Chairman, are about 57,000 megawatts on the PJM grid basis with a peak of about 54 or 55. We have about 6,000 in the ground.

Mr. BARTON. Your supply equation, your supply situation, is larger than your demand situation?

Mr. QUAIN. Absolutely, but there is also an ability to bring in, on long-term and short-term contracts, to balance any particular supply or demand in the event a generating unit is down for unscheduled maintenance, for example.

Mr. BARTON. Chairman Schriber?

Mr. SCHRIBER. Mr. Chairman, I would probably speak more accurately in terms of reserve margins.

Ohio, if you take into consideration peaking power, baseload, we are talking roughly 35,000 megawatts. During peak periods normally in the summer in Ohio, we have reserve margins now that are down from up in the 20 percent range to somewhere between 6 and 10 percent reserve margin, which is—may sound fairly comfortable, but it is not as comfortable as you might think if you have an extraordinarily hot summer.

Mr. BARTON. Your supply equation, your supply availability, is larger than your—

Mr. SCHRIBER. Exceeds our demand, yes, sir.

Mr. BARTON. This is a general statement, and if you disagree, the panelists, I want you to say so. But is it fair to say that one of the differences between California and Pennsylvania and Ohio is that in Pennsylvania and Ohio your supply margin is greater than what your expected peak demand is, and in California, it is not? Is that a fair statement?

Mr. QUAIN. That is one of the major differences.

Mr. BARTON. Would you agree with that, Commissioner Wood?

Mr. WOOD. Present, as contrasted to when the deregulation legislation was passed, yes, it certainly is true.

Mr. TRAVIESO. As far as Maryland is concerned we are members of PJM, the Pennsylvania-New Jersey-Maryland interchange, and our peak is included in the PJM peak and our supply is included in the PJM supply. At the moment, there are 4- or 5,000 megawatts of excess capacity in the ground.

Mr. BARTON. One of the lessons that I think we need to learn from the different States is that if you are going to restructure or deregulate, you should make sure there is a mechanism to, to the largest extent possible, guarantee that the supply availability is larger than the expected demand request.

Is that a lesson that we should think about?

Mr. SCHRIBER. I would say so, Mr. Chairman.

Mr. QUAIN. Could I add just one qualifier? That doesn't necessarily mean that the generation has to physically exist in your State.

Mr. BARTON. I understand that. I would think you would agree that if it is not in your State, you have to have contracts to get it in your State and a transmission capability to transmit it to your State?

Mr. QUAIN. Absolutely.

Mr. BARTON. Commissioner Schriber, in your testimony you went to some detail about the siting process in Ohio.

Mr. SCHRIBER. Yes.

Mr. BARTON. California has a siting process also, and when you look at the history, the time it takes to site a plant, in California it can take as long as 3 years or longer, and in Ohio it takes a year, 6 months to a year to make a decision.

I would like Commissioner Wood and you to elaborate on your siting procedures in your States, to the extent that you can fairly briefly.

Mr. SCHRIBER. I can't speak precisely to how California sites, obviously.

In Ohio, briefly, we have the authority to usurp, to a great extent, home rule, which often gets in the way when you have a State without a siting board. We work in concert with the Ohio EPA, who also will grant a certificate.

Our whole thing is need and convenience in the public interest. If an application before us is deemed worthy of an application, it is because there is a need for that power and it is convenient, and again, it is something that we have the capability of implementing without a lot of local interference.

Mr. BARTON. In Ohio, what is the maximum time before a decision is rendered on whether a plant shall be sited or not? If every intervention step is taken, how long would it be before a decision is rendered, yes or no, in your State?

Mr. SCHRIBER. On a gas peaking plant, I would say the turn-around time could be 6 months to a year, at the most.

Mr. BARTON. At the outside?

Mr. SCHRIBER. The outside.

Mr. BARTON. Commissioner Wood, in California, where the people have required a more interventionist system, could you answer the same question; what is the maximum amount of time that—not necessarily a decision, but some decision is rendered on whether to allow a plant to be built?

Mr. WOOD. It is hard to answer that directly for the reason that it is a very dynamic situation right now. It was recognized some time ago, early in the Gray Davis administration, that we had slow processes which were not appropriate to a market-driven situation, they were appropriate to a regulated situation.

In the last number of months, especially since the summer, many of these processes have been expedited, particularly for peaking units, and so that the time necessary has been compressed very considerably.

Mr. BARTON. Let me ask it this way. In your memory bank, what is the shortest time period in which a decision has been rendered, not necessarily yes, but just a decision, on a request to build a plant in the State of California, the shortest that you have actually got a decision rendered?

Mr. WOOD. I believe that for peaking plants, for smaller peaking units, those are now being done in the range of about 6 months.

Mr. BARTON. So you know of a case that a decision was made within 6 months?

Mr. WOOD. I cannot say that. The reason for that is that the body that does the siting in our State is the California Energy Commission, not the Public Utility Commission. So I don't deal with those.

Mr. BARTON. What about the longest? I hear anecdotal stories of 3 years.

Mr. WOOD. Yes. Certainly before the recent changes, there were plants that took multiple years to—for the entire siting process to be completed. But as I say, it is dynamic, so it is hard to say at the moment.

Mr. BARTON. I understand that what are purported to be remedies are being instigated in California.

My time has expired. I want to, before I yield to Mr. Boucher, bring to the members' attention a report that has just been released this week by the CERA Energy Group, the Cambridge Energy Research Associates. It is entitled "Power Beyond California's Power Crisis: Impact, Solutions and Lessons."

This is a proprietary report, but I have spoken with the founder of the research association, Daniel Yergin. He is going to give every member a copy of this report so we can study it. It is fact-based. It is non-judgmental in a political sense. It goes into a great amount of detail about the history in California, the current situation, and some proposed solutions.

I would call this to the members' attention as we get into this problem in more detail.

I now yield to Mr. Boucher for 7 minutes for questions.

Mr. BOUCHER. Thank you very much, Mr. Chairman.

Mr. Travieso, I would like to call your attention to some comments that were made recently by Dr. Mark Cooper, who is with the Consumer Federation of America. You may know him. He cautioned that problems that are similar to those that have been experienced in California could also be experienced in other States that have adopted retail competition plans.

Specifically, he said the following: Without vigorous Federal policies to open the transmission network and prevent the abuse of tight markets, consumers will pay billions more in unjustified overcharges.

Do you share those concerns from your perspective as the public advocate in Maryland?

Mr. TRAVIESO. Yes, I do. Mark Cooper and I have actually met with our public service commission chairperson, not about this subject, but I am very familiar with Dr. Cooper and have read a number of his papers and been on panels with him.

The issue, I think, is that the phrase "tight market" is, to me, the key. Let me give you an example of one of the issues that is now facing PJM. PJM has a much better market, a better functioning market, than California does. As Chairman Barton was pointing out, there is more capacity than demand, and plants are being built. But here is one of the things that is happening at PJM. There is a capacity market at PJM. There is also a requirement

that suppliers have a 19 percent reserve; that is, that they actually have 119 percent of the capacity they need to meet the demand.

Well, those two things intersect because actually in PJM, there is just about an additional 19 percent above what is needed typically. So what that means is that there is a very tight market, in the capacity market, for suppliers who have to buy capacity to meet their requirement and the sellers who know that the suppliers have to buy the capacity to meet the market. So the prices in the capacity market currently do not actually reflect competitive prices. They reflect market power prices because of the tight market.

That is an example of an issue that PJM is currently working on.

So these kinds of issues exist in any wholesale market that deals with a commodity like electricity.

Mr. BOUCHER. I heard you suggest in your testimony that the tight market circumstance certainly is reflected in the decision by power suppliers in some instances to withhold power in order to maximize price. But does that situation also pertain with regard to transmission?

I have heard suggestions that perhaps the wholesale transmission market is not working particularly effectively and that some transmission owners may actually be operating in such a manner as to favor their own economic interest and withhold transmission at a time when the market is tight and when transmission should be made available to other suppliers.

Mr. TRAVIESO. Well, transmission is a bottleneck, in economic terms. If someone has control over that bottleneck and also has an interest in generation, then there is an opportunity to favor one's own generation. One of the benefits of the PJM marketplace is that the transmission owners have assigned control and management of their transmission facilities to an independent operator, PJM.

So I think we dealt effectively with that problem in the PJM region.

Mr. BOUCHER. What about on a national basis, however? Do we have a problem with an inefficient transmission market with respect to wholesale transactions? And if you think that we do, is this a concern that Congress should address or does FERC at the present time have adequate authority to address the problem administratively?

Mr. TRAVIESO. Well, I am not really an expert on the transmission problems in other areas. I do think that there are some States where each owner of the transmission system can charge a rate and it is like a pancake rate. So it inhibits the free flow of electricity because a generator has to pay like a postage—instead of a postage stamp rate, has to pay a rate per mile, and that adds a significant cost. So there are issues there.

Mr. BOUCHER. Dr. Schriber, let me ask you to comment on this question, if you would.

Mr. SCHRIBER. Thank you, Congressman. I would like to.

I think probably the greatest impediment we have to the development of a good retail market, in any State, is the lack of a substantial, vibrant, if you will, wholesale market which includes transmission. Electricity simply does not move as it should move between regions.

It is interesting to find, when you go to conferences, read lots of papers, everybody is willing to tell you what is wrong with regional transmission organizations. At the present time, it is very difficult to find anybody or any group of people who are willing to come together and say here is the problem, here is how we solve it. It is an economic problem. It is a physical problem. But the economics are confounding a lot of people.

The other part of the question: Where does FERC belong in this equation? For a number of years FERC has been shorthanded. It is a 5-member commission that hasn't had 5 members. They couldn't get votes and, quite frankly, it is my opinion that they have not stepped forward at times when they should have.

In Ohio, where we actually have three regional transmission organizations operating, it makes no sense. What we would advocate and we would ask the States around us to advocate for is a regional RTO, if you will. If FERC is not willing or able to step forward and do so, we are more than happy to.

Mr. BOUCHER. Does FERC have the authority to do that, in your opinion?

Mr. SCHRIBER. Yes, FERC does have the authority.

Mr. BOUCHER. So we do not need to empower FERC any further in that regard?

Mr. SCHRIBER. In my opinion.

Mr. BOUCHER. But perhaps to encourage it to simply take some steps that would address the problem?

Mr. SCHRIBER. Yes, sir.

Mr. BOUCHER. Let me ask you another question. I was somewhat intrigued by your testimony concerning the need for demand-side management, a sentiment with which I entirely agree.

I wonder if you could take just a moment to describe to us what the Ohio PUC has done to encourage demand-side management, and what kind of response you have gotten to that encouragement from the investor-owned utilities in the State.

Mr. SCHRIBER. Congressman Boucher, we have not done much in the way of demand-side management in the last number of years. This was, again, a product of the 1980's. It was like gasoline. We all have very short memories, and I think our memories are beginning to come back. I do believe fervently that it is time that we do step forward.

It is difficult to incent utilities to move forward with demand-side management. On the other hand, a simple, to me, real-time metering is something that I cannot comprehend is not in each of our homes. I can't imagine why they cannot put a meter in our homes that tells us what we are using, how much, at what time of day, so we can see what the price is this hour, next hour. It is inconceivable the technology that we have today, that we don't have those in our homes. That, to me, would be an outstanding start because if we know what we are buying, just like when we go to the supermarket, if we know what we are buying and how much we are buying of it, we know what it is going to cost us.

Mr. BOUCHER. Thank you very much.

Mr. Chairman, my time has expired.

Mr. BARTON. Thank you.

We would now like to recognize Congressman Largent for 7 minutes for questions.

Mr. LARGENT. Thank you, Mr. Chairman.

Mr. WOOD, what was the rationale for not allowing utilities to enter into long-term contracts in California?

Mr. WOOD. The creation of the Power Exchange and the funneling of all of the transactions, the utility transactions through the Power Exchange, was really a fundamental underpinning of California's deregulation experiment, as I understand it. I wasn't a policymaker at the time.

The major concern was that the utilities, if they retained control over either the supply side of the equation, which would be ownership or control of the generation, or the demand side, which meant purchasing as the major purchaser on behalf of their customers, they would be able to exercise market power and that might be detrimental. In the case of what was addressed by the Power Exchange, it would be detrimental to the interests of competition among generators and marketers.

Therefore, the Power Exchange was established as a transparent market in which it would not be possible for the utilities to exercise any market power. They were made essentially passive participants in that market.

This concept was, in effect, endorsed by FERC which recognized it as a centerpiece or an underpinning of the California's deregulation structure, and although it wasn't embedded in the legislation itself, the legislation was passed—AB-1890 was passed after the final decision by the commission that established the PX. And so it was implicitly endorsed by the legislation. That was, as I understand it, the rationale.

Mr. LARGENT. Was it also endorsed by the utilities?

Mr. WOOD. The entire project was endorsed by the utilities as part of a compromise essentially between the utilities and large customers with eventual sign-on by other parties. Later on, several years into the experiment, at least one of the utilities, Southern California Edison, asked for—began to ask for some changes in that regime.

Mr. LARGENT. So essentially it was just a bad call by everybody?

Mr. WOOD. Certainly in retrospect, it looks that way. Up until May 22nd of last year, it looked like a great idea. Prices were stable, they were low, they were below regulated prices and then the wheels came off after that date.

Mr. BARTON. Will the gentleman yield?

Mr. LARGENT. Yes.

Mr. BARTON. It is true now that because of what has happened, long-term contracts are allowed in California?

Mr. WOOD. Yes. Long-term contracts have been permitted since August 3 of last year. There is a condition attached to them that unless there is a sign-off by the PUC staff on the reasonableness ahead of time, or that it falls within a certain safe harbor, then the utilities may be subject to reasonableness review afterwards, and if their actions are found to be unreasonable then they could be—they could face some sort of disallowance. But in the face of that, nevertheless the utilities, at least Southern California Edison and PG&E have engaged in long-term contracts since that time.

Mr. LARGENT. Mr. Travieso, I had a question for you. You said something that was of interest to me about empowering FERC to address market power abuses like those that took place or are taking place in California. Can you define market power abuse and maybe give us an example of the type of abuse you are talking about that took place in California?

Mr. TRAVIESO. Yes. I don't have personal knowledge of this, but I guess I would direct the committee to an article that I think does a pretty good job of discussing this issue. It was published in the Public Utility Fortnightly, January 1 of this year, by Robert McCullough, called "Price Spike Tsunami."

He has done a very good analysis, I think, of which plants ran and when they didn't and how the price curves changed, and the famous May 22nd date is the date that he uses to start with.

One example would be if you are a generator and you own two different kinds of plants, one of which is a baseload or a plant that runs fairly often, and the other of which is a plant that comes on at the peak or near the peak, you could choose, for example, to have an outage, an unplanned outage, in your plant that runs at a lower bid price. And there actually have been—the number of outages have gone up from 5 to 10 percent up to about 50 percent in California in recent months. You could choose to have an unplanned outage on the unit that runs at a lower bid price. That would then force the demand price to go up because the supply would go down. If you thought that you could run the other plant, the peaking plant, long enough and at high enough price for it to be profitable, you would do that. And there is some evidence that that occurred.

Mr. BARTON. Would the gentleman yield?

Mr. LARGENT. In just a second I would be glad to yield.

Are you saying that there is some evidence that there was a conspiracy of sorts to shut down a lower profitable plant, a base plant, a baseload plant, and go to a peaking plant that you have more profit? You are saying that that was deliberately done?

Mr. TRAVIESO. I don't know if it is a conspiracy. In the investigation that FERC had, the staff reached some conclusions along those lines but the FERC never adopted them. But it doesn't even have to be a conspiracy. I mean, individual owners of plants, with enough information—and one of the flaws of the California system was they got a tremendous amount of information about what the demand was going to look like the next day—could make that rational decision without it even necessarily being any kind of illegal act. They could make that decision just based on a rational business decision. But the effect would be to raise the price substantially, to raise the retail price.

Mr. LARGENT. The gentleman.

Mr. BARTON. I just want to try to set the record, or put into the record, it is my understanding that until they abolished the Power Exchange in California that everybody that supplied power had to put it in through the Power Exchange, and there was a market clearing process established that the highest price anybody bid that day was the price that everybody received. It is also my understanding that the distributor of utilities had to purchase from the Power Exchange and sell at a fixed rate that was set by the law

unless they had an existing long-term contract that they were allowed to continue.

So the example that is in your article that you referenced doesn't make sense from the standpoint that anybody supplying power, unless they had a long-term contract before the Power Exchange went into place, would get the identical price regardless of which plant they were utilizing.

Mr. TRAVIESO. Well, there are hourly markets, and the market at the end of the day for the last 300 or 400 megawatts to meet the demand that you can't shed, produces prices that are \$3,000 a megawatt. That is why—has produced prices that were \$3,000 a megawatt. That is why somebody in the situation I described could choose to try to create that situation. And the bid prices for power during nonpeak hours from baseload plants had traditionally been \$30 an hour. So there is an incentive, based on the structure of the market, to do that.

Mr. LARGENT. I just had one other question, Mr. Chairman.

Mr. BARTON. Sure. I took part of your time.

Mr. LARGENT. Mr. Quain, I just wanted to ask you, I was listening to the response by Mr. Travieso about capacity, the 119 percent. And either Mr. Quain or Mr. Travieso, if you know the answer to this question, I am just wondering how much new generation is currently under construction or in the process of being brought on-line within the PJM power market grid?

Mr. QUAIN. I do know that, Congressman, and only because I was asked a similar question yesterday by the Pennsylvania State Senate. PJM has queues, and I think they go A, B, C, D, E and F, and the higher up in the queue you are, the more likelihood of completion. In queues A and B, which has a 75 percent likelihood of completion, there are currently 15,000 megawatts. Of that, 6,000 either in upgrades for existing units or new construction are currently being built now. The remainder expects to be built over the next 5 years.

Going to queues C, D and E, I think it goes down to there is an additional 31,000 megawatts. Now, clearly, the further you go down the queue, you have to question the likelihood of financing being available, whether the market conditions will exist that will allow those investors to believe that their investment is indeed prudent and continue to construct those. So that is the long answer to your question.

Mr. LARGENT. So the tight market that you mentioned, Mr. Travieso, will become significantly less tight as this new generation is brought on-line?

Mr. TRAVIESO. We would hope so. There is 2,500 megawatts that actually is currently under construction.

There is an issue, though, with respect to what gets built in the future, and that is because the way the PJM system works is, they review these projects and they determine the effect that the new plant will have on the transmission system and they assess the cost of that to the developer.

So, developer one will have a certain effect on the transmission system and that will increase the load on the line. As you get further along, you get two or three power plants along, the third plant will have an enormous effect or could have a multiplier effect on

the transmission system, which means that the cost of that project could be substantially more for the same plant than the cost of the first project in line.

I haven't seen any studies or analysis which attempts to take that into account in terms of the likelihood that these projects will get built. But the short answer is I think we are going to have significant increases in capacity, but when the risk changes and the reward changes based on costs of the project, I haven't seen any analysis of that. But at some point it could.

Mr. LARGENT. Thank you.

Thank you, Mr. Chairman.

Mr. BARTON. Thank you, Congressman Largent.

I will recognize Mr. Waxman for 7 minutes for questions.

Mr. WAXMAN. Thank you, Mr. Chairman.

Mr. Wood, I want to thank you very much for your testimony. Perhaps we should be paying particular attention to your testimony since you predicted several years ago the problems we are seeing in California today.

As you are no doubt aware, there are sometimes advocates who will exploit a problem to advance an unrelated agenda, and I am concerned about this in the case of California because the President, some Members of Congress, and even a few generators have blamed our State's environmental laws as being responsible for California's energy problems. They have also blamed the Federal Clean Air Act, the Endangered Species Act, the forest roadless policy, the ban on drilling in the Arctic National Wildlife Refuge or, it seems, almost any other law they never liked in the first place.

Mr. Wood, you mentioned several causes for California's problems in your testimony but you don't mention environmental laws. I would like to have it clear in the record: Are environmental laws responsible for California's electricity problems?

Mr. WOOD. No, not in my opinion.

Mr. WAXMAN. Have clean air laws or other environmental laws prevented the generation of electricity?

Mr. WOOD. No, they have not prevented it.

Mr. WAXMAN. Have the environmental laws prevented the construction of adequate electricity generation facilities?

Mr. WOOD. No, that has not been the cause.

Mr. WAXMAN. If I understand, your view of the root cause of California's problems is the creation of a dysfunctional market, not environmental regulations; is that correct?

Mr. WOOD. That is right. It is reliance upon, solely upon market mechanisms to provide adequate generation in a timely manner, and that has not occurred; which, as you pointed out, I testified before this subcommittee 3½ years ago and pointed out the problems of relying on the market in a business cycle context where new generation would come on-line in response to price signals but perhaps not in a timely manner.

Mr. WAXMAN. Well, under this current system it is remarkably easy for suppliers to game the system to drive up prices, isn't that correct?

Mr. WOOD. Yes, it certainly is. And that has been partly discussed already, but if you are interested I could maybe explain some of the mechanisms.

Mr. WAXMAN. If you could briefly. I had some questions, but I think it is important to get this on the record.

Mr. WOOD. Yes. In the California market, several of the players of the generators each control 14 percent or more of the total generation that is available. Those include AES, Duke, Dynergy, Reliant and Southern Company. As I pointed out in my testimony, for the last month we have every day been in a stage 3 emergency. That means that reserves are less than 1½ percent. In that environment, any generator can withhold a relatively small portion of their total generation in order to drive prices up.

The net effect would be, if, for example, the actual cost of generation, the marginal cost for a particular producer, is, let's say, \$70 a megawatt hour, given the current high gas prices, but if withholding, say, one-quarter of the available generation by that particular market participant would result in prices that were, say, \$280, or four times the price, they would be a net beneficiary even though they weren't running part of their own generation.

This explanation does not require collusion, and therefore it doesn't require market power abuse. It merely involves the exercise of market power. As I have been told—I am not an economist, but I have been told by economists that when market power exists, it is exercised. It is really a definition of market power that it will be exercised.

So this constitutes an exercise of market power.

I would also point out that while FERC has not seen it necessary, and in fact apparently has denied that it is possible under their existing authority, to intervene in this situation, to require refunds or any restitution of that sort—I saw an item recently that in England, which is considered by many a model for successful deregulation, the generation regulator in that country last summer called Southern California Edison's English affiliate, generating affiliate, on the carpet for withholding generation in order to drive up prices. So in that example of a deregulated country, they still have a market referee which looks over these kinds of abuses.

Mr. WAXMAN. In California, we had no market referee so we had an incentive, in essence, through this market-based system to take advantage of the consumers by charging these extraordinarily high prices by manipulating the supply.

Mr. WOOD. That is right. So far it has been taking advantage of the utilities, except for a period of time in San Diego, the results of these abusive market behaviors.

Mr. WAXMAN. That is because they have put caps on retail sales?

Mr. WOOD. That is right, the frozen prices.

Mr. WAXMAN. I know the legislature, the Governor, the Public Utilities Commission in California, are working around-the-clock to resolve this problem, and in doing so the State has sought the help of the Federal Government, specifically the Federal Energy Regulatory Commission. In fact, many of the western States have also sought FERC's assistance in temporarily taming these wholesale prices. Recently 8 western Governors, 5 Republicans and 3 Democrats, have called on FERC to implement a temporary cost-plus pricing requirement on wholesale electricity, but FERC has rejected these calls for assistance.

Do you believe FERC has a role, a responsibility, to act?

Mr. WOOD. A plain reading of the Federal Power Act seems to indicate they have an obligation to act. The Federal Power Act, as I recall, requires that wholesale prices be just and reasonable and says that if they are not, then they are unlawful.

Again, I am neither an economist nor a lawyer, but my understanding is that when there is an unlawful act or an unlawful situation implicitly, if not explicitly, there is some sort of remedy. The FERC is the agency of government set up under the Federal Power Act to enforce that law, and I think clearly they have that obligation.

Mr. WAXMAN. Well, when California deregulated it, handed over its authority over generators to FERC, and the assumption was that FERC wouldn't allow the exercise of market power, particularly in the way we have seen it. Yet FERC has failed to conduct a comprehensive and detailed investigation. It has failed to take any action to temporarily control these unjust and unreasonable rates.

Some have argued that if the PUC would simply raise rates, PG&E and Southern California Edison could regain financial stability if they just allowed for the increase in rates, and FERC has identified that the dysfunctional market in California can result in unjust and unreasonable prices and some market participants can exercise this kind of market—can exercise market power. Does simply raising rates make sense with this kind of market in place?

Mr. WOOD. Whoever—if you raise rates, it simply transfers the burden of this dysfunctional market to another group of parties, which would be the customers of all classes. Presently, the utilities have been a buffer. They have suffered immensely as a result of it, and unfairly, I believe. But it doesn't solve the problem. It simply means the consumers, rather than the utilities, then have to pay these unjust and unreasonable prices.

Mr. WAXMAN. Well, the Secretary of Energy, Mr. Abraham, has expressed concern that if we didn't allow prices to be increased it would discourage new generation. In your view, is this true and is there a way to provide much needed emergency relief to California without discouraging new investment?

Mr. WOOD. At this point, I can't imagine what would discourage new investment in California. The owners of the plants that were divested have probably paid off their entire initial investment over the last 8 months or so. It is a gold rush there, but even under—in a well-regulated market, that allows for a reasonable return on investments, which is what I think all of us in California are asking for, there is ample opportunity to invest profitably in California.

We have a wonderful economy, as you know, in our State. It is the most diverse economy in the United States. It is a strong economy, which is heavily based in a powerful agricultural sector, a very advanced technological sector, and the prospects, I think, for investment there are outstanding, including in the energy area.

Mr. WAXMAN. Mr. Chairman.

Mr. LARGENT [presiding]. The gentleman's time has expired.

Mr. WAXMAN. My time has expired, but let me just for the record, if I might point out that the Government Reform Committee held a hearing in September and they indicated the applications for

electric turbine permits moved through the process in a timeframe that averages 12 to 18 months. States would take the first steps in this process. EPA frequently does not become involved except to concur in what the State is requiring for pollution reductions.

This isn't an unreasonable timeframe for a big industrial facility that will be in operation for the next 30, 40 or 50 years. But I thought the committee ought to have the benefit of the record on that.

Mr. LARGENT. I thank the gentleman. The gentleman from Illinois.

Mr. BARTON. Before we recognize Mr. Shimkus, we would like Commissioner Wood, for the record, since Mr. Waxman has alluded to it, the records of the various regulatory authorities in the State of California on permits that have been requested and the length of time to make a decision, yea or nay on those for, say, the last 10 years. Is that possible?

Mr. WOOD. I believe so. As I pointed out earlier, this process is controlled by the California Energy Commission, and I will take that request.

Mr. BARTON. I understand they are different.

Mr. WOOD. And arrange to get that information for you.

Mr. BARTON. Thank you.

Mr. WAXMAN. I think we ought to have the Energy Department in California come in and testify so we can get some of that.

Mr. BARTON. I just bet we can allow that to happen.

Mr. LARGENT. The gentleman from Illinois is recognized for 7 minutes.

Mr. SHIMKUS. Thank you, Mr. Chairman.

I am going to refer back to a question that Mr. Largent asked and also this article from Harry Levins from the Post-Dispatch. The question that Congressman Largent asked was why did California not go to long-term contracts? I want to make sure, Congressman Waxman—I want to make sure you don't leave because this is a California thing and I am just throwing this out because it relates to Congressman Largent's question. Harry Levins says this in this article which we submitted for the record so you all should be able to get it, "The planners looked back to the late 1970's and early 1980's when California utilities got locked into wildly overpriced long-term deals to buy bits and pieces of power generated by solar and wind power. The planners told themselves, we will not make that mistake again."

Based upon your position, is that a plausible answer why California didn't lock themselves into long-term contracts?

Mr. WOOD. That is part of it. We had a very aggressive implementation of PURPA, which resulted for years in billions of dollars of overmarket electricity prices, although we ended up with a very diverse resource base as a result of it. But by the early 1990's, there was an overhang of over 20 percent excess capacity in the western market and the utilities were very reluctant to see any new generation built outside of rate base. And therefore, when the Public Utilities Commission in the early 1990's would not let Southern California Edison at least build new generation and rate base, which they wanted to do, but required that it be built outside of rate base, because even then the commission was looking for-

ward to the days of an unregulated nonrate-based market and generation, then Edison aggressively opposed that, went before FERC and got the project locked based on a technicality.

So that was a large part of it, yes.

Mr. SHIMKUS. And this is why hearings are important to research. I mean, we are having a crisis in California right now, a crisis made by decisions—based upon decisions that were made in the 1970's and 1980's. And if what seems to be correct is part of those decisions were made based upon the PURPA requirement in Federal law, which we discussed here numerous times in energy dereg, and for my new colleagues on the committee, this is an important statement to understand, but also as a big renewable supporter from commodity growing States of corn and soybeans, I always find a way to talk about ethanol and biodiesel anytime I get a chance, we are not saying it is bad. It is just you need to understand the full picture, that the PURPA requirement did cause some decisions to be made. In this case, they may not have been the best decisions.

Mr. WOOD. Congressman Shimkus, if I could just note, there is a remarkable parallel between the implementation of PURPA in California and some of the things that we did in our deregulation project, particularly the Power Exchange. Under PURPA, in California, the utilities were essentially made passive not price takers but accepters of generation at a fixed contract price that didn't really correspond to actual costs, and that resulted in what was called the QF gold rush in the mid-1980's, with subsequent problems.

The Power Exchange similarly recommended, or resulted in making the utilities passive price takers in the market, and preventing them from acting effectively or having a truly dynamic market involving equal interaction between buyer and seller, and with consequent disastrous results.

Mr. SHIMKUS. And I appreciate your testimony because it speaks to the argument of the basic economic equation of supply and demand, and consumers paying prices for the goods they want to receive. We want to make sure that obviously as policymakers that the market works so that we have the folks represented by Mr. Travieso, and in my perspective Marty Cohen from the Citizens Utility Board in Illinois, that the competition, the market equation, works and we have more choices at lower cost. And it does. But we interspersed the equation of demand and control through the regulatory scheme.

Illinois is going through high natural gas prices. One of the reasons is because of our focus on power generating and peaker plants to meet above-load demand. We have drawn down stocks of natural gas that have been used—built up to be used as the heating fuel of choice in much of the Midwest, double the price. This is all inter-related. That is why the Chairman is correct in doing a couple of things, pushing for a national energy audit. What are we producing? What fuels are we using? So we can understand the context by this whole debate, what fuels are we consuming?

My position is, we need to explore a lot of the alternatives of basic fuel.

A question for Mr. Quain. Of the plants in the PJM market, what are the basic fuel components of the plants that are on the drawing board?

Mr. QUAIN. What is on the drawing board is almost all natural gas.

Mr. SHIMKUS. And that should be a scary signal to anybody whose home is heated by natural gas, which prices have doubled.

Mr. QUAIN. I agree with that statement. I would note that currently we have 57 percent coal, about 36 percent nuclear, and I think as we look forward we have to look at fuel diversity as we build these new plants. I couldn't agree more.

Mr. SHIMKUS. I think part of a national energy policy and strategy will be looking at our fuels, making sure we put the money into research and development to make sure they meet our environmental standards, but we have to have a diversified portfolio. In my opening statement I submitted for the record, Illinois does have a very diverse portfolio of coal-based generating, nuclear generating. Also, peaker plants are sprouting up all over the place.

As much as you hear problems about the electricity price in California, we are hearing it. We are hearing it on natural gas. And it is because of the whole national energy equation.

My time has expired. I am not going to go over. I appreciate the time. I yield back.

Mr. LARGENT. I thank the gentleman.

Now the gentleman from Pennsylvania is recognized for 7 minutes.

Mr. DOYLE. Thank you, Mr. Chairman.

I have two questions, and I will give them to you both at once and then if you each take 105 seconds to answer, my 7 minutes will be up.

I know it is not an easy question, but what specific oversight do you think should rest at the Federal level and what should rest at the State level to maximize the potential benefits of deregulation? And then second, in a more general sense, generally what do you think is the best way to encourage States to consider retail competition? And you can each just take a stab at it down the line.

Mr. WOOD. The first question was what sort of oversight should rest at the Federal level?

Mr. DOYLE. Right.

Mr. WOOD. Clearly—first of all, I think that existing oversight of interstate transactions is appropriate. I don't think it is appropriate for the FERC to overreach that. There are many transactions which, in fact, are intrastate and they should remain that. And in general, retail transactions should remain within State jurisdiction. But the Federal Government plays a necessary role in overseeing interstate wholesale transactions.

What we are finding—what we have found in California, certainly, is that there is a need for somebody to ensure that the market, to the extent that it exists, is workably competitive and to ensure that. All other markets that I can think of in the United States are effectively regulated in some way, not to determine prices but just to make sure that they remain workably competitive.

We do not have an effective system for doing that right now with electricity, certainly in the western United States.

Your second question, I am sorry, I didn't get it written down.

Mr. DOYLE. Just generally, what do you think is the best way to encourage retail competition, reciprocity requirements, relieving States of the requirements of PUCA and PURPA? Just, you know, what are your thoughts on how we can encourage retail competition?

Mr. WOOD. I think that is really, respectfully, the wrong question. The question that I would say more properly should be how can you permit and allow to develop as appropriate retail competition, because there are and there will be States which for their own reasons, and very legitimate reasons, see that it is not beneficial to enter into retail competition. I won't list States but I think some of them are very well known.

In California, we are seriously rethinking the dimensions of our experiment. It remains the Governor's belief and hope that deregulation can work, but we have—we are moving toward putting a lot of things on hold. That has happened in a number of other western States as well.

So anyway, having said that, I think that, again, the most effective thing that can be done is to assure that there will be fair and "policed," if you don't like the word "regulated," markets so that it will embolden States to launch into ventures like this. I think everybody in the country is terrified now because of what happened in California.

If there had been some kind of market enforcement, then we would have problems but they wouldn't be nearly of the dimensions that we are facing right now, and it would enable other States to move forward or in whatever other direction they want to go with more confidence.

Mr. QUAIN. Did you take my 110 seconds?

Mr. DOYLE. 105.

Mr. QUAIN. I will give you a very broad answer, Congressman, because obviously the devil is always in those details. I think the one thing that Congress can do is define a visionary long-term as well as short-term national energy policy. We need to know where we are taking this Nation, given the growth in energy demands on it, and we need to have a long-term energy policy to do that.

I think encouraging transmission investment, encouraging generation investment can be part of that; encouraging production; encouraging demand-side management. Research and development also can be part of that; making sure that we take care of the less fortunate amongst us to make sure that this human needs commodity gets to every household as well as to every large industry. All of that has to be part of it.

Having said all of that, I think it is appropriate for Congress to put parameters for States to work within. What is happening in California is not just only a California problem. It is affecting our State, not nearly to the extent that it is the residences and businesses of California but it is advocating the Nation and we need to have certain parameters by which we all agree to play.

With that in mind, each State, I think, needs to have the flexibility to design the program for their own demographics, economy,

whatever, geography, climate; but nobody works best without a deadline, and I think Congress would do—if you believe in electric restructuring as I do, if it is functioning properly and put together properly, it works. I think putting a deadline by which States should act would help the process a great deal.

Mr. DOYLE. Thank you.

Mr. SCHRIEBER. Congressman Doyle, let me answer your second question first: How could we encourage States? I think the most important thing that we could do at this time is to enhance the wholesale side of the market. Not only does that bring electricity to the doorsteps of the State that wishes to restructure, but, and I think what has evaded a lot of questioning here, is the fact that electricity will move out of the State, too. That could have some serious consequences. But the larger the market, the more electricity is going to flow and you are going to have a better market, and that will encourage more, I believe, States to become involved at the retail level.

As far as oversight goes, I firmly believe, as I said in my opening remarks, that what we have learned as commissions, as commissioners, is that we have to be very, very vigilant. We have to look for the early warning signs and we have to swallow hard and step on some toes and stop the process if it is going in the wrong direction.

Mr. DOYLE. Thank you.

Mr. TRAVIESO. Congressman, I think at the Federal level we certainly should be concerned about reliability. I think we should be concerned about market power and mitigation of market power in the wholesale markets; fair access and control of the transmission system through ISOs or other similar organizations such as that, and maybe helping create a market for load management. There really isn't such a market in PJM, as I understand it, at the moment. That would be a market where large users of electricity can bid in to the market, discontinuing using a certain amount of their load and get paid for it and make an economic decision as to whether they want to do that or not.

At the retail level—I mean at the State level, I think certainly the retail market should be within the State's control. Things like distributed generation, the rates of distribution, demand-side management at the retail level, and things like renewables, I am not sure where they belong. There certainly could be a Federal policy and there could be a State policy to encourage the development and use of renewables.

With respect to encouraging States to consider deregulation, I think the best thing you could do is nothing for the time being. We have 25 States that have adopted deregulation statutes. The market is infantile at the moment, and even in California we don't have a very long experience. I think it would make sense to see what happens in these various States, see how it progresses with different plans in place, see whether competition develops, see whether they have market power issues. I don't know, for one, what is going to happen in Maryland when our price caps are lifted in 4 years. I have no idea. So I think that would be useful data for you to have before you made a decision about whether you should require that on a national basis.

Mr. DOYLE. Thank you, gentlemen.

Mr. BARTON. The gentleman's time has expired. Before we recognize Mr. Walden, let me make an announcement just kind of for the good of the order. We are not going to take a lunch break, but with the members still present if each of them take their full 7 minutes and extend it a little bit, it is probably going to be 2:30, 2:45 before we are through with this panel. So if you are in the audience or you are on the second panel and you want to stretch your legs or just go out and get a sandwich, feel free to do so. Just do it discreetly so that we don't bother too much our witness panel.

If you are on the first panel and you need a personal convenience break, you got my permission to just kind of head out and come back and we will continue on without you.

Mr. Walden is recognized for 7 minutes.

Mr. WALDEN. Thank you, Mr. Chairman. I hope I don't lose the whole audience here.

Mr. Wood, I guess I was listening to your comments earlier today about how the California consumers shouldn't bear the price for this debacle of restructuring. I think I am capturing what you said, in terms of price caps. You made some comment about it shouldn't be shifted to them. They are kind of the innocent bystanders in this. Is that accurate?

Mr. WOOD. What I meant to say, whether it came across clearly or not, is that the consumers should not have to pay for the unjust and unreasonably high wholesale prices.

Mr. WALDEN. Right. Now, do you believe that there is any relationship between price and consumption in the energy markets?

Mr. WOOD. Depending on class of customer, there is some. There is not as much as one might think.

Mr. WALDEN. But there is some.

Mr. WOOD. There is some.

Mr. WALDEN. You don't think conservation is driven by price? If my bill goes up to \$600 a month, you don't think I am going to turn my lights off or turn my thermostat down much to reduce my bill?

Mr. WOOD. We have some empirical data on that. In San Diego, during the summer of last year, people were exposed to price signals representing 300 percent increases in their bills. We saw consumption go down by no more than 10 percent across all classes of consumers.

Mr. WALDEN. Over what period of time?

Mr. WOOD. That was just in the summer.

Mr. WALDEN. How many months?

Mr. WOOD. That was a period of about 3 months.

Mr. WALDEN. Because I would think there would probably be a 1-month lag or 2 before they saw the price. When you get your bill, you don't know you have been stung.

Mr. WOOD. Right. People were aware of what was—this is toward the end of that period.

The information that I have talking to experts about it is that in the long run there is quite a bit of elasticity of demand that can be triggered by price signals. In the short run, there is very little. It requires cultural changes for small customers. It involves technical changes for large customers.

Mr. WALDEN. So the longer you put off that elasticity, the longer it is going to take to get to conservation, or that place?

Mr. WOOD. Conservation coming from price signals, yes.

Mr. WALDEN. Right. I guess the question I have is, you know, the Northwest is still in the spot market because we are short about 3,000 megawatts.

Mr. WOOD. That is right.

Mr. WALDEN. So the extent to which Californians don't suffer a price increase and therefore don't conserve results in higher prices in that spot market, because you are out competing for more energy than you otherwise would be, right?

Mr. WOOD. That is true.

Mr. WALDEN. So, therefore, those of us in the Northwest who are seeing our bills go up 40, 50 percent, are paying the price for the price caps because California isn't taking those on? I mean, that is hitting us at home right now in my district, in my State, because we are out there competing with you at your peak period at a time which would not normally be our peak period because we don't have price controls.

Mr. WOOD. Well, I think that your question assumes that a price responsiveness by all consumers would result in the reduction of prices to the people that you represent.

Mr. WALDEN. No. It might, but it also reduces the amount your utilities are in the market or in the spot market. Right?

Mr. WOOD. Yes.

Mr. WALDEN. If demand goes down, they are not out competing at this point, right?

Mr. WOOD. That is true.

Mr. WALDEN. So therefore the price on the spot market ought to be less?

Mr. WOOD. Well, it ought to be, but the experience has been that there is not much of a correlation between supply—between supply and demand relationships and price in the spot market in the West since the beginning of last summer. And I can—if you would like—I don't know that I have—

Mr. WALDEN. I would love to see that. I didn't take a lot of economics in college.

Mr. BARTON. Well, you still have retail price caps in place in California.

Mr. WOOD. Yes.

Mr. BARTON. They were suspended in San Diego briefly, and then because of the uproar for the wholesale price passthrough, they were reimposed in August. That is my understanding. So there really wasn't much of a history to determine whether there was a price response.

Mr. WOOD. What we know is that during certain hours of the day when demand is low and supply is adequate, that there was not a significantly large drop in prices during those hours. And from that, we extrapolate that—and also during days of the week and of the month and so forth when similar conditions take place, we saw a price plateau. We didn't see peaks and valleys anymore.

Mr. BARTON. But I think Commissioner Schriber's point in his testimony that we really don't have demand meters, I don't know the exact buzz word but—or a person knows what they are paying

at 4 o'clock in the afternoon, they know that on a monthly basis they get a bill and it gives an average kilowatt per hour price, but they don't know that at 4 o'clock on August 10 that they should have been charged \$20 a kilowatt hour? So we have really not given the price signal to the market at a time when it would mean something, in my opinion. That is just an opinion, though.

Mr. WALDEN. I share your opinion, because I don't think some of our industries are looking at an hourly basis. They are looking over the next 6 months. They are seeing projected rate increases for Bonneville to be out in the spot market at 60 percent or 300 percent, or something like that, and trying to figure out if they should plant their crops, because it is going to cost 2 or 3 times as much to pump the water later this year. So I do—I mean, I believe there is a relationship there between demand and supply as it relates to price. It may not be something that is quick and direct on a daily or hourly basis, felt by the consumers, but people are sure planning that way as we go down the road.

Let me touch on two other questions. One is when the Federal Government mandates that suppliers with surplus send power to utilities that may be bankrupt, who ultimately should be responsible for that cost if those utilities can't pay it?

Mr. WOOD. If the prices that are being charged in the wholesale market are not just and reasonable, then the just and reasonable portion should be the responsibility of the ultimate users of the retail ratepayers. But the remaining amount should be disallowed and should be refunded by the generators or marketers who are charging the unjust and unreasonable prices.

Mr. WALDEN. Okay. We can argue about that part of it, but the specific question is, when the Clinton administration, and followed by the Bush administration for a few weeks, continued the order mandating that some suppliers send power to companies they might not otherwise have thought were creditworthy, are my ratepayers going to get stuck with that bill if those utilities in California can't pay for it?

See, I look at that as kind of a takings. I am telling you, you ought to send your credit card to my Chairman here and he may use it and not be able to pay it back, and tough luck; and it is your family that is going to pay the bill. And that concerns me that in the Federal law that allows for that to occur. In an emergency situation maybe the ratepayers in a completely unaffected State in terms of deregulation in California get stuck paying the bill while your ratepayers have a rate cap.

Mr. WOOD. All I can say is that there are many unjust distortions that start occurring once we start tracing the consequences of this dysfunctional market. I wouldn't—I don't want to get argumentative and I wouldn't argue really with your conclusions.

Mr. WALDEN. Let me just conclude with one other comment, because in your colloquy with my colleague from California, you seemed to be saying that the environmental restrictions laws on the book had no impact on power supply or price. Is that—I mean, that is what I thought I heard.

Mr. BARTON. This will have to be your last question. We have let you go about a minute and a half over. Let the gentleman answer the question and we will go to Mr. Strickland.

Mr. WOOD. Yes, that is my conclusion. We have sited and seen constructed over the last couple of years quite a number of power plants in California. The process may take somewhat longer than this in some other States, but I don't view this as an obstruction. It may change the planning.

Mr. WALDEN. To either price or supply?

Mr. WOOD. That is right.

Mr. WALDEN. Could I just have a slight follow-up since I yielded to you?

Mr. BARTON. Oh, all right. Very slight.

Mr. WALDEN. From the perspective of the hydrosystem, clearly the Endangered Species Act plays a role in price and supply in water years. I am not arguing you blow that out, but I just don't get it, how you can say those laws don't have an impact. Do you care to respond?

Mr. WOOD. Between 1990 and 2000 the State of California added 2,670 megawatts of new capacity. The surrounding States also added new generation. The State of Washington added over 1,300; the State of Oregon, 890.

The planning horizon for these things is a longer time than for many other products. I don't really quibble with your conclusions. It is a very dysfunctional, distressing situation. I am concerned about the hydro-issues in the Northwest as well.

Mr. WALDEN. Thank you, Mr. Chairman.

Mr. BARTON. We now go to the gentleman from Ohio, Mr. Strickland, for 7 minutes.

Mr. STRICKLAND. Thank you, Mr. Chairman. I will try not to use my 7 minutes, but I note that approximately, I think, 52 percent of the electricity generated in this country is generated through coal; another approximate 20 percent or so is generated through nuclear power. I note that California and the West is heavily reliant upon hydropower, and because of rainfall and the snowpack and so on, they may be experiencing difficulties in the future.

The question that I would like to address to the four of you is this: Do you think that we should have Federal policies that encourage diversity of fuel in order to make sure that no one region of the country certainly does not become overly dependent upon a single source of electricity?

Mr. WOOD. Yes.

Mr. QUAIN. Yes.

Mr. SCHRIEBER. Yes. However, I think that the market in and of itself is going to dictate a lot. We have heard and heard and heard about the woes of natural gas, and I think that in and of itself will cause a lot of people to move away from natural gas. So perhaps the national policy might be to direct industries and direct us to adhere more to the messages that the market is sending us.

Mr. TRAVIESO. I would be concerned about that kind of a policy because whenever we have done that in the past we have made a mistake. It seems to me that if you picked one fuel, let's say you picked coal, we really don't know what is going to happen with the price of coal or the use of coal. Nor do we know whether the market would want to build a baseload plant. That is really—what is happening in the marketplace, the reason these plants are natural gas plants, is because they are the most efficient plants that the devel-

opers want to build. So the market has caused them to use this particular kind of fuel.

I do think that where there is a problem with competition and market entry, like with renewables, and where we want to—if we had a national policy that favored the use of renewable energy, then maybe Congress should do something about that.

Mr. STRICKLAND. Okay. There are four States represented here. Would you share with me what percentage of the electricity in your individual States is the result of nuclear power, roughly?

Mr. WOOD. In California, the proportion is about 7 percent of the annual average load.

Mr. STRICKLAND. Pennsylvania?

Mr. QUAIN. Pennsylvania is 36 percent.

Mr. STRICKLAND. Ohio.

Mr. SCHRIBER. Congressman Strickland, I am trying to calculate real quick here. With our nuclear plants that I can think of, we are probably looking at less than 10 percent.

Mr. TRAVIESO. I don't have the exact number. I know it is 40 percent above our gas and electric, which represents a significant percentage of the total generation. So it is probably about 20 to 25 percent.

Mr. STRICKLAND. The reason I ask you is I am particularly concerned about nuclear power and I don't want to be a Johnny one-note here, but the fact is that I believe we are entering into a period in this country where Russia has their finger on our national light switch. And the fact is that we are importing a huge percentage of the fuel necessary for our nuclear power plants from Russia and attempts are underway to import even more of that fuel, while at the same time our domestic capacity to create this fuel is in danger of being obliterated, I believe.

There is a report that was done by the Nuclear Regulatory Commission last fall, a report that I have been trying to get a redacted copy of, Mr. Chairman, so that all members of this committee and members of this Congress can know what it says, and thus far the NRC has refused to provide that information.

But we cannot afford to allow ourselves to enter a situation where some 20 percent of our electricity output is controlled by a foreign country.

I just thank this panel. I think you have helped us all to become more knowledgeable about a whole complex of difficult issues. With that, I will return my time.

Mr. BARTON. Thank you, Congressman.

I recognize the Congressman from Nebraska, Mr. Terry, for 7 minutes.

Mr. TERRY. Thank you.

Commissioner Wood, you were appointed by the Governor. I am unfamiliar with your—

Mr. WOOD. In California, the Governor appoints commissioners, who are then confirmed by the State Senate.

Mr. TERRY. You were appointed when?

Mr. WOOD. I took office in June 1999.

Mr. TERRY. You are a Davis appointee?

Mr. WOOD. Yes.

Mr. TERRY. Have you heard of the regional clean air incentives market, RECLAIM?

Mr. WOOD. Yes.

Mr. TERRY. In layman's terms for us, could you explain what RECLAIM is?

Mr. WOOD. Probably not real well. But there are emission quotas or permits that were granted to various industrial facilities, and as those facilities reduce their usage or go out of business or whatever, then those quotas can be traded. They are useful in allowing—

Mr. BARTON. Will the gentleman yield? If I were to characterize the RECLAIM program as a State program to reduce NO_x emissions by 80 percent from current levels over a 5-year period, and it creates an emission trading credit system; if a plant wants to continue to operate above its certificated emissions, it can purchase on the open market a NO_x trading credit for so much a ton, would you say that is a fair assessment of the program?

Mr. WOOD. I would so stipulate, yes.

Mr. TERRY. Just another way of saying it. Thank you, Mr. Chairman.

Mr. BARTON. Just to expedite the process.

Mr. TERRY. We will get into that aspect, as well.

Now, as I understand it, the vast majority of power generation, the power plants in California are 30 years old, 40 years old, and probably have a great deal of NO_x emissions, so the payment of these tax credits, when they exceed the emissions, is an inherent part of the process.

Are you aware, during the last year that this crisis has evolved, what has happened to the price of those trading credits?

Mr. WOOD. This is another one of those spot market issues. On the spot market, the prices went up considerably, although most of the generators, to my understanding, do not rely upon spot market purchases of those credits.

Do you know the price, the fluctuation of the price of the credit from, let's say, year 1999 to December of 2000?

Mr. WOOD. I heard testimony back in September at hearings that we held in San Diego, and what sticks in the back of my mind is we saw fluctuations of on the order of tenfold or more. But I am not sure that is true.

Mr. TERRY. Generally the price of the credit is about \$1 per pound—

Mr. BARTON. Per ton.

Mr. TERRY. Per ton.

Mr. BARTON. It is per pound. I am wrong.

Mr. TERRY. Fluctuated to as high as 50. And the average in December 1999 was \$45, so \$45 times an average.

Now, that certainly, as I understand the system, and maybe you can set me straight, but when the generator has to pay in essence a penalty for exceeding the NO_x, what the State allows for nitrogen oxide to be placed into the air, a \$45 increase, this is passed on to the cost of production, and then through the pipeline to the consumer? At least, someone has to absorb that cost.

Would you agree with that scenario?

Mr. WOOD. I believe there are two processes working here. One is the permits for a certain amount of emissions, and the other is penalties paid when those are exceeded. This is not my area of expertise.

In any case, the State, specifically the Governor, intervened in this situation last year and has, through a negotiated process, created accommodations for generators, because they had to run in order to maintain reliability of this system, that exceeded their emissions quotas.

Mr. TERRY. I understand that. It is not labeled a penalty, by the way. You purchase this credit to exceed.

So this is all getting down into the issue of whether any environmental laws from the State of California in any way affect the price.

Are you saying, then, that the generator having to pay \$1 1 month and then up to \$45 or \$50 per pound for this credit is not impacting price?

Mr. WOOD. It affects price on the margin. But the problem is that even with this particular issue included with the high gas prices, we are not seeing any correspondence between underlying costs and prices in the wholesale market. If we were, then your conclusion, I think, would be true, that the —

Mr. TERRY. If a study showed that just in December of 2000, that the necessity to pay the additional costs for these credits added anywhere from \$500 million to \$2 billion to the cost of power, you would refute that study, that conclusion?

Mr. WOOD. From \$500 million to —

Mr. TERRY. Yes.

Mr. WOOD. It certainly did not add that much to the actual cost of generation. If you have a marginal pricing structure, then by raising the marginal cost of the least efficient producer, then you could produce a result like that in the market, I suppose.

Mr. TERRY. Thank you. I yield back.

Mr. BARTON. Thank you, Congressman.

Congressman John is recognized for 7 minutes.

Mr. JOHN. Thank you, Mr. Chairman. I have two brief questions, one of which may seem as a follow-up to my colleague from Ohio, Mr. Strickland. It deals with fuel diversity.

We talked about California, and Mr. Strickland talked about nuclear energy, but I would like to take it one step further. Do you have the numbers, the figures in front of you, that show the percentage breakdown of the fuel types used by electricity generators to supply the State of California?

I want to ask the witnesses from California and Pennsylvania to see if there are any lessons that we may learn in this area of fuel diversity.

Mr. WOOD. As it happens, I do have those figures. I didn't do it in preparation for this, as a matter of fact, but I have a slide that shows this.

These are average proportions based on experience over an entire year. It changes quite a bit from season to season.

But about half, 49 percent, is oil and gas, which is almost all natural gas. Renewables constitute 6 percent, coal about 1 percent,

geothermal 5 percent, hydroelectric 24 percent, nuclear 7 percent, and then imports 8 percent.

Again, at times imports are much higher than that, and at other times imports are almost nonexistent. The imports include various hydro, as well as coal.

Mr. JOHN. Okay.

Mr. Quain?

Mr. QUAIN. If memory serves me, it is 57 percent coal, 36 percent nuclear. The last percent is a combination of oil, natural gas, and a little bit of hydro, some renewables.

Mr. JOHN. Looking at those percentages where gas is a prominent generator in both of your States, somewhat, coal being more in Pennsylvania and hydro being a player in California.

Are there any conclusions that we can draw about fuel diversify or maybe we should diversify a little more?

Are there any conclusions that you could see?

Mr. TRAVIESO. Yes, which is why I answered your earlier question in one word, yes. Fuel diversity to me is a hallmark, just like financial diversity is a hallmark for personal finances. You want to be able to put on and shut down facilities at points in time when, as compared to other fuels that are out there, other generators are there, that are high. So at a point in time when natural gas is high and coals are low, you burn less natural gas for generating purposes and increase your coal. The same thing with nuclear.

But if you don't have a diversity, you can't take advantage of the cycles of the marketplace as the economy drives one particular fuel over another.

Mr. BARTON. Will the gentleman yield?

Mr. JOHN. Yes.

Mr. BARTON. I want to ask the chairman of the PUC in Pennsylvania, you mentioned a little bit of supply of renewable in your supply equation. But my understanding is on the consumer side that a fair number of Pennsylvania consumers have opted for the green consumer option.

Do you know offhand what percentage of your switchers have switched to the so-called green—retroactive.

Mr. QUAIN. I don't know the exact number. I would be happy to give that to you offline, because I think it might be proprietary. But we had virtually no green power in Pennsylvania before electric deregulation. Now some of the highest energy in the country was produced in the Philadelphia area. We have a lot of consumers who are paying even higher than those rates just to say that they are using green power.

Mr. BARTON. But that is a proprietary number?

Mr. QUAIN. The number of customers, I believe it is. But I would be happy to give it to you.

Mr. BARTON. We don't want to get proprietary information, but any generic—

Mr. QUAIN. It has been one of the real thrills. When we did this, we knew there would be consequences we could not foresee.

I never dreamed, for a PICO customer paying some of the highest rates in the country, that there would be many who would be willing to say they would pay more to say they are burning environmentally compatible energy.

Mr. BARTON. These are some of those rich Republicans in the Philadelphia suburbs that want to be green, is what it seems to me like.

Mr. JOHN. I would ask the gentleman, how complex and flexible can you be in turning off and on, as you mentioned earlier, the market supply, when the gas prices are up? Can you turn that off and on? Help me—

Mr. QUAIN. With certain facilities you can. You have what you call baseload facilities, and then you have peaking facilities. That is why a grid like PJM is a very efficient and effective way, not only for reliability but for pricing purposes.

When you look at low curves, in the morning when we are all asleep, the load is very low and you are burning the cheapest power to meet that demand. As people get up and start to turn on their ovens and start to ride the trains to work and the manufacturing facilities are starting to tune up, you can see that load grow. So as that load grows, you continually put on, incrementally, the more expensive generation to meet that demand. That is why we got into the conversation over here about time-of-day rates.

So yes, that is exactly what happens. By the time you hit your peak, you are stressing the system to the extent that all generators that are up and running properly are being used. If you can bring down that demand to a reasonable level and flatten it out, then the result is you are burning less, more expensive fuel, and still meeting the demand that you need with less expensive fuel.

Mr. JOHN. I want to get to my next question here. There is a story in the Los Angeles Times today, the headlines are, "Impatience with State's Approach to Crisis Grows." It is talking about the legislature and the Governor.

I guess one of the scenarios that is a possibility is for the State of California to take over the transmission grid in exchange for paying billions of dollars to the utilities to help them refinance all of their debts.

I would like your comment this scenario. I would like to know, is that a good thing, a bad thing? Is that just a Band-aid, a quick fix, or can the State actually handle the grid and the operation of it by owning it?

I am just concerned about where this is going. Maybe just a brief comment from you. Is that a viable solution?

Mr. WOOD. Of course, I have personal opinions about it, but I would like to ask if I could take a pass on that, specifically because the issue is before the legislature and the Governor right now. I am not an elected official in the State. I think it would be appropriate for me to stay out of that debate until I am called upon by our State elected officials.

Mr. JOHN. Okay. That is all I have, Mr. Chairman.

Mr. BARTON. Thank you.

The gentleman from Kentucky, Mr. Whitfield, for 7 minutes.

Mr. WHITFIELD. Thank you very much.

Mr. WOOD, you had indicated that in California, that 1 percent of the electricity produced is produced by the use of coal. Is that correct?

Mr. WOOD. That is the in-state proportion, that's right. We do get quite a bit of coal-fired power from outside of the State.

Mr. WHITFIELD. About 20 percent of your demand is met by outside-produced power, is that correct?

Mr. WOOD. The imports are about 8 percent, on average.

Mr. WHITFIELD. 8?

Mr. WOOD. On average. As I said, at times it is quite a bit more than that.

Mr. WHITFIELD. I read some article a while ago that said that you were importing about 20 percent of your total demand.

Mr. WOOD. The numbers that I am providing are historical data, and it very well may be that certain things have changed. I am sorry, I don't have really an exhibit to offer here. I could get it for you if you would like.

Mr. WHITFIELD. That is all right. In Pennsylvania 57 percent is produced by coal?

Mr. QUAIN. That's right, Congressman. Frankly, I would like to see more, if we could make it comparable with the clean air quality standards.

Mr. WHITFIELD. What about in Ohio?

Mr. SCHRIEBER. Much more than 57 percent. I can't tell you the exact number.

Mr. WHITFIELD. Maryland?

Mr. TRAVIESO. Similar to Pennsylvania. The majority of our electricity is coal-produced.

Mr. WHITFIELD. Mr. Wood, when this bill was passed in California, many people refer to it as restructuring rather than deregulation because a lot of the goals of deregulation were never met. But the utilities were required to divest themselves of 50 percent of their generating capacity, is that correct?

Mr. WOOD. Of their fossil generating capacity, yes.

Mr. WHITFIELD. Okay. And the other 50 percent was required to be sold to the power exchange, is that correct?

Mr. WOOD. All of their retained generation, which it turned out they actually divested 100 percent of their fossil generation, but they retained hydro, nuclear as well as some long-term contracts and out-of-state produced power that was utility controlled. That was required to be sold into the power exchange, yes.

Mr. WHITFIELD. Okay. And then they were required to buy back from the power exchange?

Mr. WOOD. That's right, all of their needs to serve their domestic load.

Mr. WHITFIELD. And any demand that you could not meet from power generated within the State, you obviously had to go out of the State to buy?

Mr. WOOD. That's right.

Mr. WHITFIELD. And it is your position that part of the problem is that these wholesale prices were unjust and unreasonable?

Mr. WOOD. That is right. And not just we were paying, but prices that existed throughout the Western Interconnect in the wholesale market.

Mr. WHITFIELD. It is my understanding that the power exchange also was buying power from municipally owned or government-owned utilities in California.

Mr. WOOD. That's right.

Mr. BARTON. Will the gentleman yield?

Mr. WHITFIELD. Yes.

Mr. BARTON. I know you are just one commissioner and you are not the government of California, but if in fact it was the political wisdom of the powers that be in California that these wholesale rates were unjust and unreasonable, why did they not immediately let people go outside the power exchange and enter into bilateral contracts, enter into long-term contracts, and even, heaven forbid, go to the New York Mercantile and begin to hedge against these prices?

If in fact you really believed that the prices were unjust and unreasonable, why did that not happen until effectively the FERC came in, I believe in December, and basically threatened to abolish the power exchange if California government did not do it?

Mr. WOOD. The first indications of market dysfunction started to show up on May 22, but that was just a series of peaks. We didn't actually see sustained high prices until the first week in June. We started to recognize that we had a problem by late in June, and by August 3 we had considerably expanded the ability of the utilities to enter into long-term contracts.

So that is a remarkably fast turn-around for regulators in our State, and I think for public officials almost anywhere, frankly.

Mr. BARTON. By definition, if you really have a market, a willing buyer and a willing seller, by definition that price is just and reasonable or the buyer would not buy and the seller would not sell.

I am just saying that is just pure Economics 101, this whole concept of just and reasonable, when you look at the facts. There have been several studies by the FERC staff, and I understand even in California by some of the regulatory authorities. They don't come to the conclusion that—obviously the prices were high, but the prices were high because there was a huge demand, and the price naturally did not get through to the consumer, so the demand increased.

You had an unregulated wholesale market but a regulated retail market, which I might stipulate might be unjust and unreasonable State legislation.

Back to the gentleman from Kentucky.

Mr. WHITFIELD. I agree with you, Mr. Chairman.

I was reading an article in the National Journal, and it was talking about the fact that many people in California feel more power should be generated by government-owned utilities, by municipally owned utilities, and that public power is the way to go.

Yet, when we do the analysis, and someone's testimony that I read for this hearing pointed out that these State agencies and local water authorities in California have been selling excess power to the power exchange, and the State water project, they said, for example, made \$23, \$24 million in profit from selling power to the power exchange. Los Angeles Municipal Authority made close to \$200 million in profits by selling power to the power exchange. Even the city of Redding earned over \$8 million, and the local municipalities using the preference power were buying power from Bonneville Power Administration and selling that at 5 to 10 times what they bought it for, and that Bonneville Power itself in the year 2000 made \$207 million in profits, a 116 percent increase over what they had made the previous year.

So it looks like to me that even the public power utilities are making money on your situation as well. The thing that particularly seems unfair about this, unlike the State's private utilities, the munis were not required to sell off their generation plants, were not forbidden to sell off long-term contracts to hedge against price increases, and they had the option of buying from and selling into the power exchange, while not being required to do so.

So this argument that public power is the way to go—it seems to me there is really not any rational reason that we should believe that, with the advantages that they have under this deregulation law in California.

Would you agree with that, or not?

Mr. WOOD. The behavior of the municipal and government-owned utilities in the California market was they behaved similarly to private companies, for profit maximization.

What creates the attractiveness of entities like Los Angeles Department of Water and Power, which is the country's largest municipal, is that they did not in fact deregulate in the sense that the other utilities did. They didn't divest their generation capacity; they kept adequate generation, they retained regulated retail rates, and as a result of that, rates in that service territory remained stable and reasonable. The utility itself was not put in financial jeopardy.

Whether that is an argument for municipal power or just a general argument against the way we went about deregulation for the investor-owned utilities, people can draw their own conclusions.

Mr. WHITFIELD. You are saying the investor-owned utilities were not required to divest, but they chose to?

Mr. WOOD. They were required to divest a large part of their generation, but they considerably exceeded what they were required to do.

Mr. WHITFIELD. The munis were not required to divest?

Mr. WOOD. They were not. There was an internal debate. There was a very close call. Originally the mayor of Los Angeles wanted to divest their generation, but the city council informally prevailed and they held onto all of their generation.

Mr. WHITFIELD. It is true that Governor Davis—

Mr. BARTON. This will have to be your last question.

Mr. WHITFIELD. You took my time.

Mr. BARTON. I took 1½ minutes of your time.

Mr. WHITFIELD. But the Governor has issued some abatement orders, and he is doing executive orders that do not require bringing these utilities online to meet all the existing environmental and regulatory requirements, is that correct?

Mr. WOOD. I am not sure which utilities you are referring to. Are you referring to new power plants?

Mr. WHITFIELD. Yes, new power plants.

Mr. WOOD. I believe in a general way all of the requirements remain. However, the permitting processes have been dramatically speeded up. He has put together what is called a green team, which helps to expedite these processes and cut through government red tape.

Mr. WHITFIELD. Thank you.

Mr. BARTON. The gentleman from Massachusetts, Mr. Markey.

Mr. MARKEY. Thank you, Mr. Chairman.

Mr. BARTON. Seven minutes.

Mr. MARKEY. Thank you, Mr. Chairman.

Last fall the FERC conducted an investigation into the California situation. That investigation found the California electricity market was "seriously flawed and caused unjust and unreasonable rates for short-term energy." The FERC also found that California's energy regime provided "an opportunity for sellers to exercise market power when supply is tight."

What actions do you think FERC and this committee should take when a State or regional electricity market becomes dysfunctional, as California has, and should we give FERC stronger market power authority, including, one, authority to mandate participation in regional transmission organizations, and to assure RTOs are fairly structured; two, enhance merger review authority, including the power to review mergers of utility holding companies, generating companies, or power marketers; three, authority to assure there is open and nondiscriminatory transmission access and an ability to interconnect to transmission systems; and four, enhance authority to take action against bad actors who game the system, manipulate prices, or cross-subsidize unregulated businesses using monopoly transmission or distribution assets?

Dr. Schriber?

Mr. SCHRIBER. Thank you, Congressman.

First of all, I believe it was with respect to the RTOs, the regional transmission organizations, that should clearly have been a FERC endeavor, including open transmission access, because that after all deals with the regional interstate, if you will, transmission of electricity.

Mr. MARKEY. Do you agree with that, sir?

Mr. TRAVIESO. Yes, that is NASUCA's position.

Mr. MARKEY. Do you agree with that, Mr. Quain?

Mr. QUAIN. Yes.

Mr. MARKEY. Mr. Wood?

Mr. WOOD. No.

Mr. MARKEY. Mr. Schriber?

Mr. SCHRIBER. Merger review, I believe the States should maintain merger review. In general, if market power is of great concern within a State because of the outcome of a merger, that should be something—

Mr. MARKEY. You don't think the FERC should have merger review?

Mr. SCHRIBER. No.

Mr. MARKEY. Mr. Travieso?

Mr. TRAVIESO. We disagree with that. This is a regional market. These are regional companies, if not national companies. We are very concerned about market power, and particularly the relationship of gas and electric companies. We would support merger review.

Mr. MARKEY. Mr. Quain?

Mr. QUAIN. I think forecast merger authority. I don't know to what extent.

Mr. MARKEY. Enhanced—

Mr. QUAIN. I don't think so. I think that is primarily a State action. We do look exactly at that, and have held hearings and made conclusions with regard to market power.

Mr. MARKEY. Mr. Wood?

Mr. WOOD. I believe FERC should have enhanced merger review authority, but that this should not preempt the States to also make decisions.

Mr. MARKEY. Very helpful.

Next, Dr. Schriber?

Mr. SCHRIBER. I am not sure what the next was, sir.

Mr. MARKEY. The next one would be to assure open and non-discriminatory transmission access.

Mr. SCHRIBER. That, too——

Mr. MARKEY. And interconnection.

Mr. SCHRIBER. Interconnection would be intimately related to the regional transmission organization issue, and therefore would be a FERC endeavor.

Mr. MARKEY. Do you agree with that?

Mr. TRAVIESO. NASUCA supports that.

Mr. MARKEY. Mr. Quain?

Mr. QUAIN. Yes. But they already have adequate authority on that. I am not sure they need more.

Mr. BARTON. Would the gentleman yield?

Mr. MARKEY. Yes.

Mr. BARTON. The two chairman of the PUCs, they don't think their State should have any authority on transmission issues and siting issues, transmission lines?

Mr. SCHRIBER. Absolutely, siting.

Mr. QUAIN. Siting, sir, yes. But we don't currently have jurisdiction over transmission. We look at it and work with the FERC on it, but we do that through a collaborative process, and it works.

Mr. SCHRIBER. The siting is one issue, the economics is another.

Mr. MARKEY. Mr. Wood?

Mr. WOOD. At least with respect to the western States, there should be considerable Federal deference to voluntary cooperative efforts among the States.

Mr. MARKEY. What if there is no voluntary cooperation?

Mr. WOOD. I think there should be some minimal Federal standards for open transmission access, although I believe that we already have workable processes for a regional transmission organization.

Mr. MARKEY. Sometimes States don't want to cooperate with other States, though. Have you noticed that?

Mr. WOOD. Yes, but we have a history prior to our deregulation of close cooperation among the western States.

Mr. MARKEY. We are not talking about before deregulation, we are talking about after deregulation. How has it been working since then? A little bit more fraternal tension?

Mr. WOOD. As I indicated in my testimony, we are working toward improving cooperation, for obvious reasons.

Mr. MARKEY. We won't call it a dysfunctional family, we will just say you are going through a difficult time with other family members in the region. Sometimes you need someone to move in. I'm just trying to stay within my time.

Mr. BARTON. It is so delightful to see Congressman Markey trying to stay within the time.

Mr. MARKEY. I am trying to stay on time, Mr. Chairman.

Finally, on the enhanced authority to deal with the bad actors, the gaming of the system, manipulating of prices, the cross-subsidies, should the FERC have enhanced power to be able to deal with those issues, since they by definition in many instances go across State lines? Mr. Travieso?

Mr. TRAVIESO. We agree. We don't think they have adequate powers now. We think they should be enhanced.

Mr. MARKEY. Dr. Schriber?

Mr. SCHRIBER. Within the State we have plenty of authority. We should use that authority.

Mr. MARKEY. How about across States lines when they are gaming, so you can reach the bad actors?

Mr. SCHRIBER. Gaming is something created by the market. I am not sure it is irrational behavior.

Mr. MARKEY. Can you reach all the cross-subsidization of unregulated business issues within your own State, or do you need any outside long arm reach?

Mr. SCHRIBER. Within our own State we have rules of conduct of all players in the electricity market, even those that are unregulated.

Mr. MARKEY. Mr. Quain?

Mr. QUAIN. I agree with Dr. Schriber again, we have adequate authority in the State. I think that is where it belongs. If there is criminal activity, there are laws on the books that exist already with regard to antitrust, et cetera.

Mr. MARKEY. Mr. Wood, enhanced FERC authority?

Mr. WOOD. In the wake of divestiture, we do not have that authority in the State anymore, and I think FERC has considerable authority which they have so far chosen not to exercise.

But I would strongly support additional authority, as well as direction from Congress.

Mr. MARKEY. Dr. Schriber, Mr. Quain says there is already adequate authority at the State level. You have said you don't have adequate authority at the State level, it is Federal level, and you don't think it should be at the Federal level because it doesn't have to be at the Federal level, and you are saying it should be enhanced at the Federal level because you don't have it at the State level, which leads to a rather disconcerting set of circumstances.

Mr. BARTON. That is why we are holding these hearings.

Mr. WOODS. Congressman, just briefly I prefaced my comment saying in the wake of our divestiture, had we not seen the divestiture of these plants, we would have retained considerable State authority. That may be the case in other States.

Mr. MARKEY. Okay.

Thank you, Mr. Chairman. I appreciate your giving me this time, and I tried to reciprocate by staying within your very wise time limits.

Mr. BARTON. Thank you. All joking aside, it is obvious that Congressman Markey knows the issue. He has been on this committee a long time. Those were excellent questions. Those are some of the

key questions we will address as we move toward structuring a restructuring bill.

Mr. MARKEY. Praise from Caesar. Thank you. I appreciate it.

Mr. BARTON. An acknowledgment of the ability of the gentleman from Massachusetts.

Another very distinguished and able member of this subcommittee, the Mr. Cox of California, for the last round of questions to this panel.

Mr. COX. Thank you, Mr. Chairman. I have to say, despite all of the horror stories coming out of my State in California, it is a pleasure to hear the stories from other States, and it is good to know that it does not have to work the way it worked in California.

I am particularly pleased to hear what is going on in Pennsylvania, where customers have been given a meaningful choice between electricity companies, new companies have been encouraged to enter the market, something that has not happened in California, prices have gone down, people, according to consumer surveys, are happier with their service than anyplace else in the country.

So I think we would do well today to spend a little bit of time eliciting from Mr. Quain as much as we can about how not to make even worse the problems we have in California.

Let me start by trying to clear the air on something that seems unwilling to go away. That is this notion that what happened in California was deregulation.

It is so vastly different than what has happened in these other States, where we have had competition, we have had consumer satisfaction, we have had prices go down, we have had supplies increase, that I just want to put it straight to the representatives from other States.

In 1996, the California legislature mandated a 10 percent reduction in retail prices. It imposed that price cap effectively until 2002. By law, it created a government-run monopoly power exchange that prohibited any utility from buying power on the open market. It outlawed market contracts for electricity beyond the spot market. It specifically outlawed forward contracts. It outlawed any market transactions between utilities and power generators. It forced utilities to sell significant portions of their power generation.

It did a lot of other dumb things, too, to prevent people from coming in, or at least to discourage them from coming in, such as saying that you have to buy a new meter to put on your house at the expense of hundreds of dollars if you are interested in switching.

For all of those reasons, we should not be surprised, not only at what is going on in California, but also that only 2 percent of retail customers ever experienced anything like changing.

So let me put the question based on that premise: Is that, in your view, deregulation, or is that just restructuring the way things work? I will put it to each member of the panel.

Mr. TRAVIESO. In Maryland, we did No. 1 and we didn't do any of the other ones. There is a statutory rate reduction. We didn't negotiate a 6½ percent rate reduction. We do have price caps which last between 4 and 8 years. We all thought that was important. Our legislature, our Governor, thought that was important.

Mr. COX. I appreciate that. All I am asking, I think it should go without saying that if you have price controls in place, that you have regulation. That can be good, that can be bad. We can talk about that. But we should not be mistaken about what it is. It is a regulation.

Mr. TRAVIESO. It is a regulated rate, and we wanted that.

Mr. COX. Right.

Would you consider what California did to be regulation, or its opposite?

Mr. TRAVIESO. It is a mix. It is a mix.

Mr. COX. Specifically, the things that I outlined, are those regulations?

Mr. TRAVIESO. Those are regulations. Yes, sir.

Mr. COX. They certainly seem to me to be precisely that.

Dr. Schriber?

Mr. SCHRIBER. At the risk of sounding somewhat absurd, I would say it is regulated competition. It is purely regulated, and to some degree competitive, but mostly regulated.

Mr. COX. You are describing now California.

Mr. SCHRIBER. California.

Mr. COX. I think—I will give you a moment to explain. What I am trying to understand is whether it is deregulation.

Mr. SCHRIBER. It is absolutely not deregulation, it is in my mind a restructuring, an attempt to impose a competitive market given constraints that are regulated.

Mr. COX. All right.

Mr. Quain?

Mr. QUAIN. It is definitely not deregulation. I am not sure how I would characterize it.

But let me add, none of us are purely in a deregulated market at this point. Stranded investment recovery is not deregulation, either. Neither are price caps. What I think the challenge is, is how you move from a monopoly environment to a purely deregulated environment. That is a period of transition, and States have handled that differently.

Mr. COX. How would you compare your State with California on the spectrum of progress from a purely regulated monopoly utility system to market competition that is not much regulated?

Mr. QUAIN. We are encouraged by the benefits we have seen over the last 3 years, but we recognize, I think as has been said here by my friends from Ohio, that we need to be vigilant. We need to watch this thing and manage it for not just the next couple of months, but for years going forward, until we get out of the whole stranded investment recovery, we get out of rate caps, we get out of the upset between supply and demand, the wholesale market settles down, and we truly do have an open and competitive market.

We have made tremendous progress, but we continue to have to work at it.

Mr. COX. Mr. Wood, you got appointed in 1999. You were previously on the record opposing what was done in 1996, so your fingerprints are not on this.

How do you characterize it, regulation or deregulation?

Mr. WOOD. I think Chairman Quain's description was a good one, but one thing I would point out is that you could say similar things about virtually any of the State's restructuring efforts. Virtually every State that I am aware of has some sort of residual benchmark or default kind of regulated rate for a transitional period, which California had as well. We screwed up a lot of other pieces of it, which some other States hopefully have not done yet.

Mr. COX. Let me now talk about the future, because the future is coming very, very fast.

In today's papers, there is more evidence that the State of California, the State government, is moving toward acquiring transmission.

I wonder if I could hear from—Dr. Schriber, you seem interested in commenting. We will start with you.

Mr. SCHRIBER. Congressman, I think that the first thing California, in my opinion, needs to clean up is its financial situation. We are talking about billions and billions of dollars, and I can't imagine anyone wanting to transmit power, I can't imagine anyone wanting to provide power with the specter of not being repaid.

So if the government of California is to participate, I would say it would be, first of all, to guarantee to the extent that they can, a certain level of debt by which the companies in and of themselves can begin to operate.

I don't think that in any shape or manner the State should take over any of the facilities involved with conveying of electricity.

Mr. COX. Mr. Quain, do you have a view on that?

Mr. QUAIN. I have yet to see the government run much of anything that private industry cannot run better if the rules are set properly. They are clearly not in California.

It would make me very nervous to be part of advising any State official in that environment to take over that process. I think you have to fix the underlying problems and get the market to help work with you, not against you.

Mr. COX. If the State of California ends up owning the transmission lines and if they are then leasing them to the utilities, it is pretty clear that the State of California is in the business. About 20 percent of California's electricity is now provided from other States, but the State of California, which is supposed to be the regulator, is also going to be the regulated entity.

We saw in spades how this did not work in the Soviet Union. The worst environmental protection in the world existed in the Warsaw Pact countries, the horrible problems that we may never clean up in our lifetimes, because there was not an arm's-length relationship between the regulated entity and the government that is supposed to be the regulator.

How does California, as it gets into this business, avoid that conflict of interest? Maybe I should start with our consumer advocate who is here.

Mr. BARTON. This will have to be our last question.

Mr. TRAVIESO. I think there is a model that exists already. It is the municipal utility model, which has been very, very successful and has produced some of the lowest rates in the country.

Mr. COX. They are regulated by a different level of government.

Mr. TRAVIESO. They are regulated by a public service commission, but the model is, they actually own the transmission system. They own the delivery system and they own some generation, and they buy the rest through long-term contracts, and that system has actually worked.

Mr. COX. But you have got to have an arm's-length regulator, yes?

Mr. TRAVIESO. They are owners of both generation and distribution, so there is—they are like an old-fashioned vertically integrated utility.

Mr. COX. You don't need an arm's-length regulator?

Mr. TRAVIESO. We don't regulate municipal utilities. They are subject to their recall votes. They are just like elected officials who run the municipal utilities. They can be voted out of office if they don't do the right thing.

Mr. COX. They didn't do the right thing in California. The utilities, as we just heard from Mr. Wood, that were owned by the government ended up profiteering.

As a matter of fact, municipals get preference on Federal power, and they bought Federal power at very cheap rates and they resold it at a markup of 500 percent to 1,000 percent, and profiteered from the situation.

Is that not evidence that we need an arm's-length regulator?

Mr. TRAVIESO. From the consumer perspective, I would much rather have been a customer from the Los Angeles municipal utility than I would be in the situation that—

Mr. COX. Because they were exempted from the 1996 law. They didn't have to sell off their capacity.

Mr. TRAVIESO. Exactly. They performed the function just like a regulated utility would. They actually are proof in California that the regulated model works better than the deregulated model.

Mr. COX. Mr. Chairman, I think my—

Mr. BARTON. Not quite. What that proves is people that actually plan on a supply reserve sufficient to meet expected demand works well. We give the municipal authority of the city of Los Angeles great credit for having the foresight—

Mr. COX. To be exempted from the 1996 law.

Mr. TRAVIESO. That is what long-range planning is. That is what the utilities were required to do under the vertical integration.

Mr. QUAIN. Can I add one thing? I am nervous about what my colleague is saying over here.

My understanding of how regulation—how independent boards started in the first place is because these kinds of decisions did not lend themselves to the legislative process. They are difficult. You have to raise rates. They are unpopular. They are hard. They are not politically driven.

If we all agree that even putting them in separate agencies, as I believe is not the best answer, we have to move even from that to something more competitive. Going back the opposite way has to be an absolute wrong solution.

Mr. COX. Mr. Chairman, I will just wrap up and observe that it has been said here by this panel that California needs to get its fiscal house in order, rather than take on these new liabilities. I think that we are kidding ourselves if we think we are protecting

consumers by capping these rates in our State, in California, at the same time that the State government is spending \$1 billion each month to go buy power in the spot market, and then prepares to issue these power purchase bonds which all these taxpayers are going to have to pay for.

That \$1 billion a month works out to about \$50 per taxpayer in the State of California each month that is getting passed on directly to taxpayers. You can pay it as a citizen taxpayer or you can pay it as a ratepayer for electricity, but you are still paying for it.

What we are doing I think is trying to mask what is actually going on and causing even further distortions of the market. So I am very, very concerned. I am very pleased that we have some good examples before us today that we can follow. I look forward to the next panel.

Mr. BARTON. Thank you.

We want to release from purgatory this panel. I want to ask for the record, though, before I release you, my opening question asked for supply demand information in terms of capacity generation, both baseload and peak load. I would like each of my chairmen and my commissioner to get that for your respective States, and if it is possible, for you to get it for the State of Maryland. You are not an elected official or an appointed official, but if it is possible, we would like to have it from Maryland also.

Mr. TRAVIESO. Yes. I could get that for you, Mr. Chairman.

Mr. BARTON. I would also like to ask unanimous consent that we submit into the record a December 21 document from the California Energy Commission entitled "Docket 000 Site 2," to request information from the California Energy Commission on some of these siting issues, and also I ask unanimous consent to put in the record a Congressional Research document entitled "Air Quality Issues," with specific emphasis on the reclaiming program in the State of California.

Is there objection?

Hearing none, so ordered.

[The information referred to is retained in subcommittee files.]

Mr. BARTON. Gentlemen, thank you. We will probably have additional written questions for you for the record. We would ask that you reply in a timely fashion. We appreciate your attendance and your testimony.

As they are leaving, we are going to have a 10-minute break. It is quarter 'til, so at 5 until we will reconvene, and we would like our second panel to be at the table at 1:55.

We will recess for 10 minutes.

[Brief recess.]

Mr. BARTON. I think our panel is available. Although I said five till, we will start a little bit early, and hopefully we will have other members in attendance.

I want to welcome our second panel. Our first panel was the public sector. Our second panel is the private sector. These are the people that have either done business or attempted to do business in some of the States that we have looked at today, and we in addition have an academic expert who is from California who has looked at some of these issues and lived some of these issues, so to speak.

We are going to start with Mr. Peter Esposito, who is the Vice President of Regulatory affairs, Dynegy. We welcome you to the subcommittee Mr. Esposito. Your testimony is in the record in its entirety, and we will welcome you for 8 minutes to elaborate on that.

Mr. ESPOSITO. Hopefully, I can use less, Mr. Chairman.

Mr. BARTON. Hopefully.

STATEMENTS OF PETER G. ESPOSITO, VICE PRESIDENT OF REGULATORY AFFAIRS, DYNEGY INC.; JOHN W. ROWE, CEO, EXELON CORPORATION; ROBERT LEVIN, SENIOR VICE PRESIDENT FOR PLANNING AND DEVELOPMENT, NEW YORK MERCANTILE EXCHANGE; ADRIAN T. MOORE, EXECUTIVE DIRECTOR, REASON PUBLIC POLICY INSTITUTE; AND JOHN R. FIELDER, SENIOR VICE PRESIDENT OF REGULATORY POLICY AND AFFAIRS, SOUTHERN CALIFORNIA EDISON

Mr. ESPOSITO. Mr. Chairman, members of the subcommittee, I appreciate this opportunity to appear before you today. Dynegy owns or controls approximately 14,000 megawatts of generating capacity in the United States, of which 2,750 is in California. That is about 5 percent of the California market.

Despite our relatively small presence in California, we have spent thousands of hours and hundreds of millions of dollars to provide California consumers and businesses with power. As a recent FERC staff investigation revealed, which I would like to enter into the record with your permission, we have been running the generating plants we bought from the California utilities in 1998 and 1999 more heavily in the last year than in the last 3 years and perhaps ever.

[The information referred to can be found at:]

<http://www.ferc.fed.us/electric/buklkpower/Public-Feb1.PDF>

Mr. ESPOSITO. These intermediate and peaking plants are 30 to 40 years old and inefficient. Because California's current needs are resulting in delayed maintenance we were forced to run them until they break, often at great additional expense, and despite growing financial risk we have committed to produce power.

Dynegy is presently negotiating with the California Department of Water Resources on a long-term sale at prices substantially below current spot prices. Dynegy takes its mission to serve our customers very seriously. It is good public and corporate policy to recognize that no one benefits if power is not reliable and consumers are shocked with staggering price increases.

What went wrong in California, I think we have pretty much covered the base. I am going to sort of summarize my remarks here. Essentially, California has added no generation in the last 10 years. That number is 600 megawatts. Meanwhile the peak has increased 15 percent, 33 percent in Silicon Valley. Notably California is dependent on imports for about 25 percent of its peak load. Last year it lost about 5,500 megawatts of import capabilities because of a dry hydro year. Now, that is a big chunk of its load.

Also, we had a significant increase in natural gas prices. Spot prices increased five to tenfold in December and January and have

doubled for long-term contracts for the natural gas that fuels 50 percent of California's generation.

Congressman Markey referred to this as the perfect storm. I use the same term and many others do.

California overrelied on spot and real-time markets. No one waits around until the last minute to buy airline tickets at the highest price. Yet this is exactly what the California power market was operating at until January 1, and because of other aspects of California's legislation San Diego customers who never had a realistic chance to enter into long-term fixed price contracts also paid those highest last minute prices last summer.

And as we spoke about just now, California did not deregulate the market. They deregulated only the wholesale side, maintaining price caps on the retail side. This capped competition out. Competition would have provided customers with the opportunity to enter into fixed price contracts on their own which they were essentially unable to do because of the structure of the California market.

They isolated customers from real price signals that could have caused them to reduce consumption. In fact, the retail rate increase of 10 to 30 percent in the context of a portfolio of long-term and short-term forward contracts would likely solve California's current financial crisis. When I explained this to one San Diego man of modest income, he responded this is about the price of a Snickers a day to fix the problem.

Other States have not and will not make the same mistakes as California. Texas. Unlike California, Texas started down the path toward deregulation in an environment where generation was being added, some 8,652 megawatts in the last 5 years with 12,745 megawatts under construction for operation in 2002. Texas is upgrading its transmission facilities and has an expansive gas pipeline infrastructure. In implementing retail competition, Texas has a price to beat structure similar to Pennsylvania's shopping credit structure, both of which encourage retail competition. Both have mandated price cuts but in neither case is the utility required to buy in real-time from the spot market. In Texas there is also an adjustment for fuel increases. So customers will see price increases subject—resulting from fuel.

Illinois' retail choice program incorporates transition power purchase arrangements where utilities who divested their generation entered into long-term buyback contracts rather than again depending solely on the spot market.

The basic message I would like to leave you with today is not to overreact to the California power crisis. The market is already self-correcting for natural gas price increases which drove a lot of the increase in the price of power this fall and winter, and producers are drilling at a frantic pace. FERC is taking action to address wholesale power market issues, and California, albeit long after it could have obtained more favorable prices, is addressing long-term contracting issues.

Congress need not micromanage these issues. Rather, it should develop a well thought out national energy strategy and address the need for open access to power transmission lines as we have spoken about earlier. This policy should include addressing the need to increase supplies of natural gas and power through access

to public lands for drilling and efficient siting of both power and gas transmission lines.

Remember, gas fuels 90 percent-plus of new generation of America. Increasing supplies of gas is the No. 1 thing that will reduce the cost of power in this country in the short term.

Encourage full diversity, clean coal renewables, perhaps even nuclear.

Promoting demand site responses, for example, incentives for conservation and efficiency research and development, tax credits for conservations and the like.

Repealing the Public Utilities Holding Company Act so that excessive costs can be removed from transmission and distribution assets and economies of scale realized.

Affirm FERC's authority to require participation in regional transmission organizations and otherwise encourage FERC to exercise all its authority to assure that new generation is interconnected as quickly and cost effectively as possible. I have spent a lot of time this morning talking about the need for transmission. Unless you can interconnect the generation, that transmission is not going to be of a whole lot of use.

And finally, give FERC eminent domain authority, when necessary, to resolve interstate transmission siting problems.

In the short term there is no silver bullet that is going to fix all of California's ills. California must do its part by finalizing long-term contracts currently being negotiated with Dynegy and other suppliers and by developing a mechanism to pay the outstanding balances owed to power suppliers so that order can be restored to the market.

Finally, one fact that policymakers in State and Federal Government should be aware of is that Dynegy's plants in San Diego are facing a 60 percent reduction in emissions limits this year, which equates to about 750 megawatts of capacity being taken off line at some point. This will further tax hydroelectric and other assets all over the West. We have heard that others face the prospect of similar cutbacks in other areas of California, and we recognize that the California agencies are addressing these issues, but there is uncertainty over when and if these issues will be resolved, and this can't last a whole lot longer.

I appreciate the invitation to join you today and I am pleased to answer questions. Thank you.

[The prepared statement of Peter G. Esposito follows:]

PREPARED STATEMENT OF PETER G. ESPOSITO, VICE-PRESIDENT AND REGULATORY COUNSEL, DYNEGY INC.

Introduction:

Mr. Chairman, I appreciate this opportunity to appear before this subcommittee today.

As you know, Dynegy is a major national generator and marketer of energy that is active in California. Dynegy owns or controls approximately 14,000 MW of generating capacity in the United States, of which 2,750 MW is in California. That's about 5% of the California market.

Despite our relatively small presence in California, we have spent thousands of hours and hundreds of millions of dollars to provide California consumers and businesses with power. As a recent FERC staff investigation revealed, we have been running the generating plants we bought from the California utilities in 1998 and 1999 more heavily in the last year than in the last 3 years, and perhaps ever. These intermediate and peaking plants are 30 to 40 years old and inefficient, averaging

a 12,000 heat rate when new technology achieves 7,000 heat rates. Because California's current needs are resulting in delayed maintenance, we are forced to run these plants until they break, then take whatever steps are necessary to bring the generating facilities back on-line as soon as possible, often at great additional expense. And despite growing financial risk, we have continued to produce power.

Gov. Davis and California Legislature are now focused on constructively solving the problem. Dynegy is presently negotiating with the California Department of Water Resources on a long-term sale at prices substantially below current spot prices.

Mr. Chairman and members of the subcommittee, Dynegy takes its mission to serve our customers very seriously. Recognizing that no one benefits if power is not reliable and consumers are shocked with staggering price increases is good public policy and good corporate policy.

What Went Wrong In California.

1. Demand grew substantially without corresponding increases in supply. California has added virtually no generation during the last 10 years. Meanwhile, its demand increased substantially—15% at peak, 33% in Silicon Valley—as a result of a booming internet-related economy.

Notably, California is dependent upon importing power for about 25% of its peak load. While California's power appetite was growing, so too was that of its neighbors. Although California represents 42% of the summer peak in the West, California's neighbors have accounted for 85% of the West's peak load growth in the last 5 years. This left California's neighbors increasingly short of excess power to export to California. While this problem was brewing, a below average hydropower year further limited California's in-state production and its neighbors' export capabilities. On top of that, summer 2000 was the second hottest in 100 years. The end result was a reduction of approximately 12% in peak import capabilities last summer. Then add a significant increase in natural gas prices, the final ingredient in the recipe for what some refer to as a "Perfect Storm"—spot prices increased 5- to 10-fold in December and January and have doubled for long-term contracts for the natural gas that fuels more than 50% of California's generation—and you can see what got us here. Making matters worse, when surplus power could be found, it could not always be moved to market, because of transmission constraints.

2. California Over-relied on Spot and Real-Time Markets. No one wants to wait until the last minute to buy airline tickets at the highest price; yet this was the required operating mode for California's utilities and customers. And, because of other aspects of the legislation, San Diego Gas & Electric customers, who never had a realistic chance to enter into long-term, fixed price contracts, also paid those highest, last-minute prices.

3. CA did not "deregulate" the market. California made a critical error by deregulating only the wholesale market, while maintaining rate caps on retail purchases. This kept out retail competition that could have given customers more price certainty when stranded cost collections were complete and price caps came off as they did in San Diego. Additionally, price caps also isolated consumers from real price signals that would have caused them to reduce consumption. In fact, when San Diegans briefly saw real-time prices last July, they reduced demand substantially. No one wants to increase retail rates, but when the price for the natural gas that fuels over 50 percent of California's peak demand is multiples of the price embedded in capped energy rates, no one should be surprised by the need for higher retail rates. Indeed, a retail rate increase of 10 to 30%—in the context of a portfolio of long- and short-term forward contracts—would likely solve the current financial crisis. Yet, rather than increase retail rates (as other Western states have done), California has chosen so far to create a financial train-wreck for its utilities in hopes of avoiding the obvious need for a rate increase.

Other States Have Not And Will Not Make The Same Mistakes as California

Texas: Unlike California, Texas started down the path towards deregulation in an environment where generation was being added, some 8,652 MW in the last five years, with 12,745 MW under construction for operation in 2002. Additionally, Texas is upgrading its transmission facilities, and has an expansive gas pipeline infrastructure. In implementing retail competition, Texas is developing a "price to beat" structure that encourages competition. While Texas has a mandated rate cut, there is a mechanism to adjust utility rates for increases in fuel costs, so Texans will see appropriate price signals.

Pennsylvania: Pennsylvania is widely touted as a retail success story, and rightfully so. Like Texas' "price to beat," Pennsylvania's "shopping credit" encourages re-

tail competition. Additionally, in neither of these markets is the utility forced to buy from spot and real-time markets.

Illinois: Similarly, Illinois' retail choice program incorporated transition power purchase arrangements, where utilities who divested their generation assets entered into long-term transitional buy-back arrangements, rather than depending solely on the spot market for supplies.

What Can The Federal Government Do?

Congress Should Not Over-React To The California Power Price Crisis

While natural gas prices are still twice what they were a year ago in much of the country, they are already self-correcting from the December and January highs. While no one is predicting the kind of price collapse that occurred in the early '80s, the market is feverishly responding: Price signals are inducing an all-out drilling effort, the Alaska gas pipeline has been resurrected, and El Paso alone has 6 LNG proposals in the works.

Rather than being tempted to legislate price caps or to re-regulate, Congress should be cognizant that the FERC has already dealt with and seen the results of a variety of price caps in California and has settled on a \$150 soft cap, one that can take into account rises in the price of gas and other inputs. In the Northeast, the FERC has a \$1,000 safety net price cap in effect, one which is much less likely to deter the addition of new generation than the lower caps tried in California. And bear in mind that cost-based regulation and government tinkering are what resulted in \$16.8 billion in so-called stranded costs that California utilities collected from their customers.

Develop a well thought out national energy strategy and address the need for open access to power transmission lines, including:

1. addressing the need to increase supplies of natural gas and power, through access to public lands for drilling, and efficient siting of both power and gas transmission lines; (Remember, gas fuels over 90 percent of new generation in America; increasing supplies is the No. 1 thing that will reduce the cost of power in this country.)
2. encouraging fuel diversity, e.g., clean coal, and renewables;
3. promoting demand-side responses, e.g., incentives for conservation and efficiency research and development, tax credits for conservation and the like;
4. repealing PUHCA so that excessive costs can be removed from transmission and distribution assets and economies of scale realized.
5. affirming FERC's authority to require participation in regional transmission organizations and otherwise encouraging FERC to exercise all its authority to assure that new generation is interconnected as quickly and cost effectively as possible; and
6. giving FERC eminent domain authority when necessary to resolve interstate transmission siting problems.

In the short-term, there is no silver bullet that will fix all California's ills. California must do its part by finalizing the long-term contracts currently being negotiated with Dynegy and others and by developing a mechanism to pay the outstanding balances over to power suppliers so that order can be restored to markets.

One fact that policy makers in State and Federal government should be aware of is that Dynegy's plants in San Diego are facing a 60 percent reduction in emission limits, which equates to taking about 750 megawatts of capacity offline, further taxing hydroelectric and other assets all over the West. We have heard that others face the prospect of similar cutbacks in other areas of California. While we recognize that California agencies are addressing these issues and that the EPA is aware of them, there is uncertainty over when and if these issues will be resolved, uncertainty that cannot last much longer.

We appreciate the invitation to join you today and I am pleased to be available to answer your questions.

Mr. BARTON. Thank you, Mr. Esposito. We now want to hear from Mr. John Rowe, who is the CEO of Exelon Corporation, which I guess is the old Revlon Corporation, who has moved out of the cosmetics business. We will let him answer that question in his testimony. Mr. Rowe is also either the current or at least the past President of EEI, if that is correct.

Mr. ROWE. Correct, Mr. Chairman.

Mr. BARTON. So we are delighted to have you, and your statement is in the record in its entirety and we recognize you for 8 minutes to elaborate on it.

STATEMENT OF JOHN W. ROWE

Mr. ROWE. Thank you, Mr. Chairman. I shall try to be brief. I appreciate the members of the subcommittee who have been patient enough to wait for us, particularly Congressman Shimkus from my own State of Illinois.

I lack the capability to be effective in the cosmetics market, so it is fortunate that Exelon is a power producer and deliverer. It is the combination of what used to be Commonwealth Edison and Northern Illinois and Philadelphia Electric in Pennsylvania. We are the largest suppliers of electricity in Illinois and Pennsylvania, two States where we believe that utility restructuring is working but we have much work to do to keep it working.

Simply put, the question I hear is should we continue to work on electricity markets or should we go back. Well, what I am here to say is there is no back to go to. We got to competition precisely because earlier models failed, and there is no sensible alternatives except to make competitive markets work for our consumers.

If you all remember, in the seventies and early eighties, utilities, whether privately owned or publicly owned, lost the public confidence, the political legitimacy or the economic legitimacy to monopolize the development of generation. This was replaced in the mid-eighties and early nineties with something called integrated resource management or integrated resource planning. That proved to have all the merits of central planning and Chicago tort litigation. It drove the prices up rather than down, made supply more brittle and politicized what should be economic acts.

I believe that Illinois experience and Pennsylvania experience strongly suggests that we can make competitive markets work, but we have to do it prudently, carefully and with a willingness to change our mind when we are wrong. In my judgment, California failed, as you have heard from many others, because it built too little capacity. It relied too extensively on natural gas and imports, something that can be a national problem. It relied far too extensively on spot markets and did not allow utilities to engage in forward contracts or own enough capacity of their own. It expected utilities to be providers of last resort for all customers under all conditions, without allowing them the resources to do that, and it shielded customers from the price impacts of their own decisions.

Illinois and Pennsylvania are presently working largely because capacity is being built, nearly all gas; largely because we have a diverse existing base of coal and nuclear power in both States; because the utilities have been allowed to be effective suppliers and have been given the resources to meet their obligations; and because utilities in these States are working on effective regional transmission organizations, such as PECO's participation in the PJM pool.

We have not, however, solved all the problems or skinned all the cats in our States. Gas is the only easy kind of generation to build and even gas fired plants are subject to nimbli pressures. Transmission can be built, but it is not easy, and as several folks have

said, expanding the transmission system is vital to an effective wholesale market.

In addition, we have not in either State resolved ultimately the tension between expecting utilities to be a supplier or provider of last resort to all consumers and the desire at the same time to have a competitive wholesale and resale market. Simply put, you can't have every customer entitled to move and utilities required to buy to provide them at the same time. It just doesn't add-up and we have still to solve these problems in my State.

What can Congress do at the present time? I believe it dreadfully important that Congress reaffirm the national goal of effective wholesale electricity markets. I believe Congress can and should encourage the development of both additional supply and additional energy conservation. I would strongly urge any actions that will help encourage gas drilling and the addition of additional gas pipeline capacity. I would also strongly urge things which protect our existing coal and nuclear fleets such as passage of the nuclear waste bill which Congress did pass last year but was vetoed.

I would urge the Congress to do what it can to eliminate obstacles to a working transmission market and to a working wholesale market, particularly repealing the Public Utility Holding Company Act, the Public Utility Regulatory Policies Act and the taxes which now exist if we try to transfer our transmission to regional transmission authorities as we ought to do.

I would urge Congress to support FERC's efforts to develop regional transmission organizations. I believe that FERC has the authority it needs to do this right now but it has not been exercised in a consistent and firm way, and Congressional endorsement in this respect might be helpful.

In sum, I believe we can make effective wholesale and retail markets work, but in order to do that we have to have evolving supplies of electricity generation which meet the needs of our consumers.

Thank you.

[The prepared statement of John W. Rowe follows:]

PREPARED STATEMENT OF JOHN W. ROWE, PRESIDENT AND CO-CHIEF EXECUTIVE OFFICER, EXELON CORPORATION

Mr. Chairman and Members of the Subcommittee: I appreciate the invitation to appear before the Subcommittee to discuss the impact of electricity market restructuring both in California and in other states. My name is John W. Rowe. I am the President and Co-Chief Executive Officer of Exelon Corporation. Exelon, formed last year by the merger of Unicom Corporation and PECO Energy, is headquartered in Chicago, Illinois. We serve over five million customers principally in Illinois and Pennsylvania, which have both restructured their electricity markets. My testimony today will focus on the very positive results in both of those states, and will briefly suggest some actions that I believe Congress should take to enhance electricity supplies and competition in wholesale markets nationwide.

California heralded the New Year with a wave of rolling blackouts, spiraling wholesale electricity prices, and threatened utility bankruptcies. The state which symbolizes the electronic age, and that represents roughly an eighth of the U.S. economy and of its population, faces electricity supply issues not seen since the Great Depression and the collapse of the great utility holding companies. Nonetheless, the recent crisis in California is not a signal that competition and deregulation have failed. It is my firm belief that market-oriented restructuring of the electric industry remains the best opportunity we have to provide consumer benefits and to develop reliable new sources of supply. Indeed, the experiments in market-based re-

structuring that are underway reflect the previous failures of public confidence in long-term planning by public utilities and regulators.

Both the Illinois and Pennsylvania experiences—about which I will be speaking today—are proof positive that thoughtful, market-oriented, evolutionary restructuring works well for all concerned. The California experience was not an accident or the product of bad luck. It was the product of choices—choices about siting generation and transmission, and choices about a market design that imposes asymmetric risks on utilities to the ultimate detriment of all. If other states make similar choices, similar consequences can be expected to follow. In short, the California experience is no reason to reject restructuring; it is rather a forceful lesson on the importance of doing it right.

Status of Restructuring in Illinois and Pennsylvania

When Illinois restructured its electric industry, it was cognizant of the risks that both utilities and consumers faced. Instead of the radical approach taken by California, Illinois adopted a phased-in plan that protected consumers, allowed utilities to manage their costs, and encouraged the development of new generation. Illinois' Customer Choice law was enacted in late 1997. It allows all retail customers to purchase delivery services from their utility and to choose their electric supplier on a schedule phased in over three years. The largest customers were eligible for such choice in the fall of 1999, and all non-residential customers are now eligible. Recognizing that the benefits of supplier choice accrue first to large customers, which competitors are more eager to supply, the legislature deferred residential customer choice until May 2002. In exchange, the law provided for an automatic 20% rate cut for residential customers. Customers were shielded from the volatility of market prices for electricity because ComEd is required to continue offering bundled retail service at cost-based rates until a fully competitive market develops. At the same time, however, utilities are given tools to manage their electricity costs, including the ability to retain ownership of generating plants, to enter into long term purchase power agreements and to hedge their exposures on the wholesale market.

As of February 7, 2001, over 10,000 customers in ComEd's service territory alone have chosen to take unbundled service. This amounts to 4,500 MW of load (a megawatt is about equivalent to the power needed to serve 1,000 homes) and 17.8 million MWh of electric service. This constitutes nearly 30% of the sales that were eligible for unbundled service under the law. Illinois has experienced no adverse consequences from restructuring; neither reliable electric supply nor the financial health of the utilities has suffered, and new construction of generation has received an impetus.

Pennsylvania has also embarked on a successful restructuring. Pennsylvania's retail restructuring began in December 1996 and all retail customers have had the right to choose their electric supplier since January 2000. To date, about 18% of the customers of PECO Energy, Exelon's Pennsylvania utility, have chosen a competitive supplier, and because the larger customers have a higher rate of switching, this amounts to about 35% of PECO's peak demand. PECO has more customers in the competitive market than any other U.S. electric distribution company. One reason for the higher rate of switching in Pennsylvania is that customers were given higher incentives to switch and a certain number of customers were actually required to switch suppliers.

Pennsylvania also has significant advantages that will allow it to avoid the California experience. Wholesale electric markets in Pennsylvania and neighboring states, and the institutions that manage those markets, are the most mature in the country. PECO Energy's service territory is located in a regional transmission organization and power pool known as the Pennsylvania-New Jersey-Maryland Interconnection, or "PJM." PJM is the most mature, liquid, and efficient wholesale electricity market in the country. To date, these institutions have shown themselves sufficiently flexible to avoid the price spikes experienced in California. In large part, this success has resulted from the fact that PJM provides a reasonable and stable environment for companies to make investment decisions about generation and because PJM operates a wholesale market in which power sales can occur efficiently. Pennsylvania law also contains protections for retail customers, while at the same time allowing utilities to recover and manage their costs of supply. Like Illinois, Pennsylvania's rules for the transition to competition were designed to protect retail customers while the market matures. In PECO Energy's service territory, there will be a transition period until 2010, during which PECO is required to provide service at capped rates. Rates for energy delivery are capped through 2006. As in Illinois, this transition period provides significant protection for all retail customers.

Illinois and Pennsylvania Have Avoided the Supply Problems Experienced in California

In a restructured market, it is essential to encourage development of new generation by independent producers that is adequate to meet growth in demand. In Illinois, ComEd has taken a proactive stance in encouraging developers in its service territory, and the results have been gratifying. Today, 2,000 MW of new capacity have already come on line. This year we expect over 3,600 MW more to come on line, all of which is permitted and is currently under construction. In 2002 another 7,500 MW are scheduled to come on line, of which 3,600 MW are currently in a definitive stage, that is, either construction has begun or equipment has been ordered. For the longer term, over 11,600 MW are projected for 2003; none of those projects is yet in a definitive stage.

PJM has also been successful in encouraging adequate development of new capacity. Currently, 46,000 MW of new generation projects have applied to be interconnected to the PJM transmission system. Of that amount, 16,000 are in a stage that gives confidence they will come into service by 2004—4,200 MW are already under construction, construction is about to begin on another 9,100 MW, and 3,700 MW consist of upgrades to generation stations that are already operating.

The capacity increases in both Illinois and Pennsylvania have come on top of a large base of reliable generation using diverse fuel sources. ComEd has at its disposal a number of large nuclear and coal units for its baseload generation. Exelon owns the largest nuclear fleet in the country and in recent years the plants have been performing extremely well. California has not only experienced great difficulty in expanding its generation to match growth in demand, but is far more dependent on natural gas and imports from other markets. By way of illustration, in 1999, just over 16% of California's power was generated by nuclear plants¹, while nuclear generation accounted for approximately 50% of the electricity generated in Illinois². Although ComEd also can turn to extensive natural gas fired resources during peak hours, for the 12 months ending last September, we depended on gas-fired generation only about 1% of the electricity we sold.³ In Illinois as a whole, gas was responsible for less than 3% of power generated in 1999⁴, whereas it was responsible for 31% of electricity consumed in California⁵. Pennsylvania, like California, has substantial nuclear generation and less reliance on natural gas. In 1999, nuclear power accounted for 36.5%, and natural gas 2%, of Pennsylvania's electricity.⁶ Substantial nuclear baseload capacity helps insulate utilities from the extreme variability experienced in natural gas prices.

California's record on building generation of any type has also been poor, and analysts agree that this is a root cause of California's problems. Less than 1,000 MW of new generation have been built in the entire state of California in the last five years.⁷ Far from reducing California's dependence on imports, this construction has failed to keep pace with demand during a period of significant growth in the California economy. For example, between 1996 and 1999, 672 MW of new generation came on line in California, and during the same period the peak demand increased by over 5,500 MW⁸. The bedrock lesson of the California crisis is that states must recognize the need to encourage new power plant construction. States must avoid imposing unduly restrictive regulations and lengthy and labyrinthine permitting and siting procedures, and must be ready to site not only gas-fired peakers, but new baseload capacity as well.

Illinois and Pennsylvania Have Avoided the Market Failures Experienced by California

Illinois and Pennsylvania have also shown that restructuring can be accomplished while avoiding the market flaws inherent in the complex California scheme. Unlike California, where the legislature imposed rigid and inefficient market structures in

¹ 1999 California Net System Power Calculation (California Energy Commission) (available on the Web at http://www.energy.ca.gov/electricity/system_power.html)

² Electric Power Annual 1999, Vol. I, App. A, Tables 7, 11 (U.S. Energy Information Administration, Aug. 2000) (available on the Web at <http://www.eia.doe.gov/cneaf/electricity/epav1/ta7p1.html> and <http://www.eia.doe.gov/cneaf/electricity/epav1/ta11p1.html>)

³ ComEd "Environmental Disclosure Statement" for the 12 months ending 9/30/00 (filed with the Illinois Commerce Commission and available on the Web at <http://www.icc.state.il.us/icc/ecedis/010101comed.pdf>).

⁴ Electric Power Annual 1999, *supra*, Tables 7, 10.

⁵ 1999 California Net System Power Calculation, *supra*.

⁶ Electric Power Annual 1999, *supra*, Tables 7, 10, 11.

⁷ Report of the CaPUC and California Electricity Oversight Board to Gov. Davis, August 2, 2000, p. 36 (available on the Web at http://www.cpuc.ca.gov/word_pdf/REPORT/report.doc).

⁸ *Id.*

advance and required a flash-cut to competition with no transition period, Pennsylvania had a pre-existing wholesale market and restructuring in Illinois was phased in over three years, giving market participants time to develop workable offerings as the market evolves on its own. Both have avoided the market design flaw that has nearly bankrupted the California utilities.

First and foremost, both Pennsylvania and Illinois allow utilities to manage their supply obligations and hedge the costs of meeting them. Mature, stable commodity markets include spot, short-term, long-term, forward, option, and futures products and buyers and sellers use these products to reduce and manage their risks. Electric utilities use these tools, as well as their own physical generation or generation under contract, to manage their risks.

California made that difficult or impossible. In California, the utilities were required to divest all non-nuclear and non-hydroelectric generation, and to sell their remaining generation into a daily central spot market from which they were required to buy all the power they needed to serve their customers every day. The utilities' ability to hedge their exposure in that market was severely restricted. The restriction on hedging was compounded by the sale of the utilities' generating assets. California utilities sold much of their own generating capacity and retained obligations to serve retail customers at fixed prices, while at the same time being unable to enter into long-term power purchase agreements with the buyers—the type of contracts that California officials are now turning to in an attempt to address their problems. When the problems with this became apparent, California had artificial rate caps imposed, which further blurred price signals to generators.

By contrast, Illinois and Pennsylvania utilities are able to use market tools to manage their supply risks. Both Illinois and Pennsylvania utilities are free to hedge their exposure to wholesale market risk through power purchase agreements and other market tools to control future price risks. They have also been able to divest generation where it is economically rational to do so, while entering into long-term purchase arrangements with the new owners of the plants—as well as other generators. Exelon provides an example of how this policy can be successfully implemented. Exelon believes that all generation in a competitive market should be on the same unregulated footing, and also that all generation in a control area should not be in the hands of a single owner. Consistent with this philosophy, ComEd sold all its fossil generation to non-affiliated parties by 1999. This year, both PECO Energy and ComEd transferred their nuclear generation to an affiliated generating company, Exelon Generation Company. In both cases, however, the utilities were able to enter into long-term power purchase agreements that assure an adequate supply of power at reasonable prices. In short, Illinois and Pennsylvania have chosen to keep their utilities as active players in the power markets, rather than to drive them out.

In sum, restructuring has not been the cause of California's problems. Policy choices have, however, contributed to the crisis. We must avoid making similar policy choices, just as we must continue to move toward efficient competitive markets in electric power. Both Illinois and Pennsylvania show that this can be accomplished, to the benefit of all.

For the longer term, Illinois and Pennsylvania, as well as all other restructured markets, will have to find solutions to the chicken-and-egg problem inherent in the transition to full competition. The more responsibility for arranging supply the delivery company is made to retain, the less incentive and ability new entrants in the market will have to compete. Wholly eliminating the delivery company's supply obligations would expose customers to too much risk, but requiring the delivery company to supply electric service to all customers at low rates may stifle competition. The utility will be forced to lock up so much of the available supply through forward contracts that competitive suppliers will have reduced wholesale supply choices. Moreover, if delivery company rates for supply are kept low, competitors may have difficulty beating them. Creative solutions to this problem are the final stage of restructuring. Such solutions must be found, because there is simply no going back to the model in which a monopoly utility makes all the plans for an area of the country.

What Should Congress Do About Electricity Markets?

I hope that my testimony today will convince the Members of the Subcommittee that competition and deregulation can, indeed, lead to positive results. The situation in California, when contrasted with Illinois and Pennsylvania, clearly shows the importance of doing it right. Proper market structures are not something of importance solely to academic economists; they are vitally important in the real world.

As the Members of this Subcommittee contemplate their legislative agenda for the new Congress I would encourage you to think about an electricity supply initiative.

It is vitally important that we have adequate electricity supplies to serve a healthy, growing economy. It is also vitally important that we have robust, healthy, wholesale electricity markets. Most observers believe that the retail market issues are best addressed by State authorities. However, the wholesale market issues are clearly the responsibility of Congress and other Federal officials.

There are a number of statutes on the books, such as the Public Utility Holding Company Act (PUHCA) and the Public Utility Regulatory Policies Act of 1978 (PURPA), that inhibit development of electricity supplies by limiting market entrants. There are also a number of tax issues that the Congress should address, such as the tax consequences of selling transmission assets to form Regional Transmission Organizations (RTOs) and depreciation schedules for utility assets. Action on both fronts is long overdue and would facilitate the development of more robust, competitive wholesale markets to the benefit of all consumers.

Mr. BARTON. Thank you, Mr. Rowe. We appreciate that testimony. We now want to hear from Mr. Robert Levin, who is the Senior Vice President for Planning and Development at the New York Mercantile Exchange. Your testimony is in the record and we welcome you to elaborate on it for up to 8 minutes.

STATEMENT OF ROBERT LEVIN

Mr. LEVIN. Thank you very much, Mr. Chair. On behalf of the New York Mercantile Exchange and myself, I thank you for inviting us and me back here before you again.

I am not going to focus this afternoon on some of the problems that have already been gone over here, and in particular, insufficient generation, unforeseen increases in demand in California, the uncapped wholesale, combined with the capped consumer market or even more recently the financial vacuum that has been inflicted in California with everything going on.

Rather, I am going to focus on market structure, a market structure that NYMEX found to be corrupt, one that reflected in our view that the California government felt that it was wiser than the marketplace, in terms of the institutions that were necessary to support deregulation, in terms of the commercial standards, in terms of conditions and practices that were necessary to support deregulation and all the way down to how prices should be formed under deregulation.

This market was severely hamstrung from the start. It was the inevitable result, unfortunately, of deliberate policies. Gross commercial inefficiency was not a consideration that California took into mind when it came up with its program. It was severely criticized by a number of parties, especially by the New York Mercantile Exchange, usually in the form of me. From 1994 all the way through 1997, we appeared there with formal appearances and written testimony more than a dozen times. Some of it we even predicted less competition, higher prices, lower consumer value.

We believe that it is important you have an appreciation of the debate that took place then because that debate is not over. It is my goal to get you to take sides. Of course, I would like you to be on my side, but frankly if you are on either side that would be better and at least acknowledge that there are sides because that was some of the problem as all this was unfolding. Some of the parties decided that both parties—both sides were arguing for the same thing and it was very hard to get heard when you said, well, no, we are not. So I will try to lay it out for you.

One side believed you can mimic a competitive market through government interference. Buyers and sellers need not directly interact. You can create an artificial middleman to buy from all the sellers, to sell to all the buyers for transactions. You can make that middleman exclusively spot because it doesn't matter, and besides, spot, according to this program, is more efficient. You can force much of the participation into this market by mandating it, in particular the utilities. You can create a series of other biases which I will be glad to lay out for you, but I am not going to right now, that also practically forces almost everything else into that market, and just to reflect how devoted to this notion of being in the spot market this program was, it insisted that the system operator—this is the one that is responsible for keeping the lights on, the one that in times of perhaps panic has to rush to the market and buy really at the last second—that the system operator, too, participates solely through the spot market.

This is an issue that obviously didn't involve NYMEX directly, but even here we debated and suggested why don't you allow them to use the tools that are available in all other free competitive markets, in particular something called a call option, so they can ahead of time lock in, as an insurance policy, prices they need to buy for. This was not part of that program.

On the other side was the belief to allow markets to develop their own institutions, their own commercial terms and conditions and standards, to aggressively promote the competition of sellers for buyers, to aggressively promote the development of commercial rivalry. This is very fundamental on the one hand, but I almost feel as if I have to go into some examples so people will understand why rivalry matters.

It occurs to me that perhaps sometimes even in this building, somehow, somewhere, somebody might be influenced, or maybe even inspired by rivalry. They may find themselves wanting to best the other side. They may work harder, longer, stay up late into the night. They may think up many ideas, experiment with them. Some of those ideas may turn out not to be very practical. Some of them may be practical, but the other side turned out to beat you to it, and then once in a while, inspired by that rivalry, you beat them.

Now, this may seem fundamental. It may seem odd that I would waste your time, and I hope that I am not in talking about it, but this type of experimenting, taking risk at one's own expense and innovating, meeting the customized needs of others, and I will give you a couple of examples for a moment for electricity, was not allowed to happen as a practical matter in California. In fact, from NYMEX's perspective, what is deregulation without that? We don't understand what it is. We don't think they ever had deregulation. We don't think a single price auction that formerly competitive rivals who have very strong rivalries in the natural gas business to get customers to line up with each other, but now they go to one market for all their sales, we don't understand how that could be the same thing. That doesn't sound like competition.

What kind of examples are there? Let me give you a few. Let's suppose you have a company such as an apartment house or like an industrial plant or school system, maybe some sort of shopping

mall that is a big purchaser of electricity. They go market—now, if they can go and have sellers come up to them and compete for their business we might find that they are willing to buy at a set price. We might find in the course of that negotiation that if they can identify an unvarying amount of their load that that price will come down because that is valuable for the seller, the supplier. To have dependable, unvarying load reduces the cost to the supplier. They might negotiate further and the supplier might say that under certain circumstances can I interrupt my sale to you, and that buyer might say I have the ability to lower how much I use. Maybe it is a grocery chain that can put the shades down, lower the refrigeration—excuse me, increase the refrigeration, lower the air conditioning temperatures and lower the price more, and perhaps as their own backup they may have their own generation or own supply. This did not take place in California.

But it does take place in the electricity market. As a matter of fact, it takes place in Pennsylvania, among other places. Commercial flexibility really matters.

I think—

Mr. BARTON. You have got about 20 seconds.

Mr. LEVIN. Let me just conclude by saying if you would allow this market to develop, you will get immediate benefits that they sorely need in California. They need to reduce the load because right now the State is buying on behalf of everybody. At some point, I don't know what the future role of the utilities is there. I'm not sure anybody does. The utilities may have to go back and buy on behalf of their consumers. Anything that would reduce the load that they have to carry will take them out of their current market circumstances, certainly take them out of the spot market. All of this would be immediately beneficial.

So we come before you today once again to promote true competitive free markets, to point out, as I think has already been pointed out, that California has not experienced that, and if they had been allowed, to we think this discussion—well, maybe this hearing might not even have had to take place.

Thank you.

[The prepared statement of Robert Levin follows:]

PREPARED STATEMENT OF ROBERT LEVIN, SENIOR VICE PRESIDENT FOR PLANNING
AND DEVELOPMENT, NEW YORK MERCANTILE EXCHANGE

Mr. Chairman, my name is Bob Levin. I am Senior Vice President for Planning and Development for the New York Mercantile Exchange ("NYMEX" or the "Exchange"). On behalf of the Exchange, I want to thank you for the opportunity to participate in today's forum concerning events in the California electricity marketplace.

The New York Mercantile Exchange "NYMEX," established in 1872, is the largest energy futures exchange in the world and the only futures market in the United States devoted exclusively to pricing, hedging, and trading industrial commodities. The merger in mid-1994 with Commodity Exchange, Inc ("COMEX," which provides a forum for trading gold, silver and high grade copper futures contracts, created the world's largest physically-based commodity exchange.

The Exchange pioneered the development of energy futures and options. From a modest 34,000 heating oil contracts traded in 1978, NYMEX energy futures and options volume grew to more than 89 million contracts in the year 2000 and now includes crude oil, gasoline, natural gas, electricity and propane in addition to heating oil.

NYMEX provides the world's most efficient forum for energy price risk management. The visible and highly competitive daily trading of energy futures and options

on the exchange provides a true world reference price for each of the commodities traded.

NYMEX has no stake in the direct outcome of the electricity market. It draws no direct benefit from either higher prices or lower prices. NYMEX only seeks the opportunity to compete in the provision of marketplace services, having never sought the role of government granted franchise to provide these services. In fact, NYMEX has expressly fought against the establishment of government created or sanctioned franchises to serve as marketplaces for electricity, believing those institutions should develop in response to market forces alone competing for the business of market participants in the same way that market participants should be competing with each other.

With this motivation, NYMEX has been an active participant in regulatory and legislative proceedings related to electricity deregulation and restructuring at both the state and federal levels since 1994. In this capacity, NYMEX provided scheduled testimony four times before the California Public Utilities Commission ("CPUC"), two times before the appropriate California Legislature committees, and more than a half dozen times before the Federal Energy Regulatory Commission ("FERC"). NYMEX has provided formal written comments in these proceedings on about two dozen occasions. The theme of our testimony and comments has been consistently to support true market competition.

The debate that has taken place over the years regarding electricity deregulation or restructuring has been largely one between supporters of government intrusion to induce prescribed results and the supporters of unmolested competition. To date, there are no examples of a truly competitive free market for electricity in the US.

What went wrong in California?

It is the Exchange's belief that California missed the opportunity in the mid 1990's to foster the creation of a truly competitive electricity marketplace. NYMEX's comments are designed to address three implicit questions: what was wrong with California, how can it be remedied, and how does this apply to other markets, PJM in particular? To answer each of these questions, the most relevant factor is to what degree was *direct access*, the actual competition between sellers of electricity to directly serve end-users, supported.

Direct access is key because it represents the core of what is meant by market competition. The engine of competition in any market is the head-to-head competition for customers that takes place between suppliers of the market's underlying product. Rivalries develop in such head-to-head competition and these rivalries lead to experiments to better serve customers through innovations in product and service or the lowering in cost. The competitive process cannot take place unless the seller directly serves customers—otherwise there is no market whatsoever and no sales. This is how competitive free markets operate for virtually every product and service. This might seem obvious to the average person, but under "deregulation," electricity has operated according to a different paradigm.

One notable exception, however, is the "deregulating" electricity market, which has relied to a varying extent on market artifices to serve in the middleman function. The artifices are state-created or mandated franchises to serve simultaneously in the role as buyer for any (sometimes all) sellers and seller for any (sometimes all) buyers. They have consistently been formed to serve the *spot* market (i.e. next day market, hourly market over the next 36 hours) and to clear offers to sell at one price.

It is no accident that where electricity markets have been structured to rely more heavily on this type of artifice, the development of *direct access* has been more inhibited and the level of real market competition has been muted. As a case in point, California was expressly designed to frustrate the development of *direct access*. The consequence of this action was eventual disintegration of competition, higher prices, and virtually no customization to better serve customers.

It may seem ironic, but *direct access* has not been the central consideration in either state or federal proceedings to date to "deregulate" electricity. In some venues, it has been accorded serious consideration, but even in these circumstances, the major focus has been on developing competition in generation. This has been conducted without regard precisely to how end-users would directly participate.

NYMEX is of the opinion that *direct access* is the most critical component of deregulation. In fact, without *direct access*, there can be no deregulation. With respect to competition in generation, suppliers would have at least as great an incentive to reduce their generating costs in serving a *direct access* market as one where they are steered into selling to a government franchised artificial buyer. Furthermore, *direct access* is the only vehicle through which the customized needs of end-users would be served.

Under the alternative to *direct access*, transactions are concentrated in the state-franchised *spot* market pool which is subject to greater overall price volatility and higher incidence of spiking prices. Tending towards the extreme, California adopted policies that drove the overwhelming majority of their transactions into the *spot* market. A market centered around *direct access* transactions would never find itself at the mercy of the *spot* market to the extent California was. There would be far greater reliance on forward contracting.

California's major flaws were that it undercut the development of *direct access* and forced its market to rely artificially on the *spot* market. It did this through mandating participation in the *spot* market by utilities, applying the add-on *competition transition charge* ("CTC") to artificially render *direct access* transactions as uneconomic, and not providing an effective program for firm transmission. The result has been very limited participation in *direct access* in California.

PJM (Pennsylvania-New Jersey-Maryland Interconnect), in these Mid-Atlantic states' approach to electricity competition in the electricity marketplace, has promoted *direct access* to a much greater extent than California and they will benefit accordingly. Nonetheless, it has incorporated some programs which hinder *direct access* and, to the extent this is done, has introduced a level of artificiality to its market. In particular, PJM has adopted a policy governing transmission congestion that introduces a substantial level of confusion to participants in the direct access market. Though well-intentioned, it was adopted over the expressed objections of supporters of direct access. Any perceived benefits (and there is a debate as to whether there are benefits) are exceeded by the very real commercial costs. One of the impacts of this program is that increases the exposure of market participants to uncertain spot prices, the very structural flaw that has unraveled the California market. This is not to say that PJM is as exposed as California—its support of direct access programs provided some insulation—but it is by no means immune.

Critical Market Considerations Have Been Ignored

The area of consideration where NYMEX has provided most of its input has been on market structure. NYMEX has advocated allowing market structure to develop on its own without government interference. NYMEX has not been very successful in this pursuit. California, in particular, rejected this position. In response to this, NYMEX predicted the ultimate outcome of California's policies to be lower competition, higher prices, and lower consumer value. The past eight months these predictions have become manifest.

Conclusion

Perhaps the single most important thing that California failed to do in avoiding a supply and price crisis was to remove impediments in the electrical grid to true competition among buyers and sellers of electricity. Any California plan that addresses this issue should support *direct access* to the market for all buyers and sellers—the current system still greatly restricts access. California's plan relied on market artifices, frustrating the development of direct access and driving an overwhelming majority of transactions onto the "spot" market, where one is forced to trade only "day-ahead." The result of the monopoly Power Exchange's "spot" market was higher volatility and higher prices for electricity. Buyers and sellers of power could not be reasonably assured that they could make or take delivery of electricity in forward contracts. The California plan stressed developing competition among generators, but failed to provide for the most critical component—*direct access*. This and many other critical factors which support truly competitive markets were omitted in the California plan. PJM has promoted direct access to a somewhat greater extent than California but it is still exposed to the same structural problems that are plaguing the California market.

Mr. Chairman, once again thank you for the opportunity to testify. I will be glad to answer any questions.

Mr. BARTON. Thank you, Mr. Levin. We now want to hear from Mr. Adrian Moore, who is the Executive Director of the Reason Public Policy Institute in Los Angeles, California. Your statement is in the record and we recognize you for your 8 minutes.

STATEMENT OF ADRIAN T. MOORE

Mr. MOORE. Thank you, Mr. Chairman, members of the subcommittee.

It is household knowledge that the deregulation experiment or restructuring in California has proven to be a disaster across the Nation. Under pressure to deregulate and lower electricity rates, State legislators acted hastily without really understanding all the issues at hand, and we are now reaping the consequences of their actions. We have got something that is neither fish nor fowl. This came up in the first panel. We are not really the old, regulated monopoly structure. Neither are we a truly deregulated, competitive market. Something more like what Pennsylvania has, we are in this strange world of our own, unlike any other State that has attempted to deregulate its electricity market.

Now State leaders are again acting in haste and with only a partial understanding of all of the consequence of their proposals, and we are moving very rapidly toward a State dominated, if not State owned and operated electricity system, the likes of which you don't see outside of Eastern Europe.

Meanwhile, summer of 2001 projections are looking particularly grim. The most optimistic projections coming out of the California Energy Commission show us having a couple of megawatts better more supply than demand under the most optimistic assumptions. We know those assumptions are not worth the paper they are written on. Blackouts are inevitable this summer under any realistic view of the future.

In the end, California residents have been denied the benefits of competition and choice in electricity that residents in other States have enjoyed. We heard in the first panel from several of these States. There are a number of others as well. So it is particularly a shame for California residents in that regard.

So what went wrong in California? I am going to avoid the academic impulse to really drill down into things and just try to hit some highlights, many of which have already been covered. The first and most important though is California did not deregulate. They restructured, and what that means in a fundamental and easy to understand way is the day-to-day operational decisions and the long-term planning decisions of the electric utilities after restructuring were more controlled by the rules imposed by government than before. You could argue that it wasn't even a restructuring, it was just a switching around of deregulation to free up controls on the generation part of the market and impose far more controls on the rest of the electricity market.

With a nod to some comments Mr. Doyle made earlier, another common failing in analysis of what happened in California is a tendency to oversimplify. The causes of price increases in California, if you just look at that slice of the problem, are enormously complex. I include in my testimony a diagram which is simply a flow chart—it is at the end—of all of the factors that you could argue fed into price increases. It filled the entire page with a sea of little bubbles and arrows of forces at work here. That is the diagram.

Mr. BARTON. I would commend all my subcommittee to actually study this. It took me 30 minutes last night, but I did study it and it is very useful.

Mr. MOORE. The lesson of that diagram is simple. Policy solutions are only going to carve out a little slice of that diagram and not really affect overall outcomes.

Some specific pathologies with California's deregulation have already been discussed. The power exchange and the pool model differed dramatically from the pool as a theoretical concept, and that is implemented in other States primarily by being mandated and being a monopoly, and I will draw some parallels of that with other policy choices in a few minutes.

The price control is another problem that has already been well discussed, but you know, put simply, prices are the mechanism that tell consumers when it makes sense to consume more or less of a good and tell suppliers when to invest in more or less production. Okay. That is a great tautology, but this is not a simple market. There is a good chance that the increase in wholesale prices or, I should say, a good chunk of the increase in wholesale prices in the California market is not simply a function of rules in those wholesale markets. It is not simply a function of supply and demand, and again, this goes back to my diagram. There are four quadrants in that diagram. There are forces acting on the supply side and forces acting on the demand side, market rules and institutions created by California law, and then those extra market forces, things going on in the natural gas markets, things going on in the market for emission controls, et cetera, et cetera, that impinge upon electricity markets. All of those things interact. So price decisions within the California market and price controls are necessarily abstracting away from all of that reality and therefore are bound to bring about distortions.

Discouraging entry in new power supplies, the gentleman from Pennsylvania made some excellent points in that regard about the difference. The last numbers I saw California had 130 companies offering to sell power to customers in that State. That is a remarkable difference from California where there are virtually none besides the original utilities at this point, and even at the beginning there weren't a whole lot in the way that was anticipated.

And partly that is a function of the power exchange I just mentioned by creating a monopoly centralized exchange like that. The theory was that would encourage small suppliers to come into the market, but the fact is lots of other restrictions, including the price controls and so forth, discouraged that entry so you didn't wind up with the effect that was intended.

And I also want to give a nod to Mr. Waxman and emphasize that I don't believe that air quality regulations as such are a significant part of the problem. Within the framework of the standards that exist, there is room to deal with this crisis without fundamentally revamping those standards. Now, I have lots of issues with the air quality standards, the national air quality standards, but out of academic honesty, I have to say that this particular crisis isn't a very good lever for revising those standards in any fundamental way. The problem really is how do we work within those standards and there is lots of room to work within those standards that are not being fully captured.

RECLAIM came up earlier, and under RECLAIM, which is a market mechanism for achieving compliance with air quality stand-

ards, there are constraints imposed by that market on electricity generation as such, but at least it is a market mechanism and we don't want to explode that mechanism in an attempt to solve the electricity crisis. We should work within that mechanism, and there is room to do so.

Now, I am not going to talk about the contrast with other States, though that is one of the questions the committee asked because the first panel addressed that, but I do want to point out something that tends to get overlooked. There is an organization called the Center for the Advancement of Energy Markets which has a very nice rating and benchmarking system for assessing State electrical deregulation schemes, and in June of 2000, they ranked California 16th in the Nation in moving toward a system that actually offered—their real bottom line benchmark is a system that offers consumers real meaningful choice and competition in the market. Now, that is 16th in the Nation at a time when a little over 20 States had even done anything toward deregulation. So California has not been for some time a model of deregulation by any stretch.

The really interesting thing about Pennsylvania, which did not come out in the last panel, is if you compare the actual reforms that were made—the institutional changes made in Pennsylvania and California, they are remarkably similar. The one overriding difference is no mandates. Pennsylvania used lots of the same institutions California did. They just made them voluntary like a real market. California made them mandatory, monopolies, controlled. They worked great as long as market conditions were exactly the same as they were at the time the legislation was passed. As soon as the world changed, those institutions had no built in mechanisms for change. They were not able to change, very fragile, and the whole thing started collapsing and we are living through the collapse right now in California.

Mr. BARTON. You are going to have to collapse the rest of your statement.

Mr. MOORE. I will go right down to recommendations here. In my testimony, I talk a lot about what the State ought to be doing but I won't belabor you with that. At the Federal level, the first recommendation I make is to recognize that the Federal role has to be limited. State law created California's problem. The bulk of any resolution lies with State law as well. FERC has done a very good job in spite of some criticisms that have been heard so far today. FERC has done a good job of trying to set California up for success, trying to create a competitive wholesale market in which a competitive retail market created by a State could function. The fact the State has failed to work within that wholesale market the way much of the many other States have, as we heard this morning, does not indict FERC's management of the wholesale market.

Another thing the Federal Government, Congress, could worry about is ensuring to the extent that it remains important a functioning wholesale market. The fact that FERC has done well so far doesn't mean we can just forget about the wholesale market. Transmission issues have come up. I second a lot of the recommendations that have been made that if we don't start thinking seriously about transmission we are not going to be able to ship

electricity back and forth across State lines the way we need to, and we are going to continue to run into these bottlenecks.

Something that hasn't come up at all that is fully under Federal purview is Federal hydro power. Bonneville Power Administration and other Federal power entities, who are all in the California market, has highlighted how absurd and distortionary Federal hydro power sales policies are. Bonneville Power Administration made huge profits selling in to the California market. Municipal utilities in California made huge profits buying that power at cost, owned by me a taxpayer, but because I don't live in a municipal utility district, it was sold to my neighbors at that cost and sold to me at a 500 to 1,000 percent markup, though we equally owned that electricity in an abstract sense, and this has really screwed up the market in a lot of ways, and I recognize this is political buzz saw.

Congress has visited the issue of Federal hydro power sales many times. It is a very regionally divisive issue, but I think the problems in California have brought a whole new light on just how distortionary they are.

Federal agencies need to do their part. There are a number of examples where unrelated policies have impinged upon electricity markets, and what has come up are environmental rules, but there are a number of other issues as well. I know of an example of a plan to use wind power to pump water uphill during the night when people aren't using the wind power and run it downhill during the day—

Mr. BARTON. You really do need to conclude. We will talk anecdotal evidence after the hearing. So get to your bottom line right now.

Mr. MOORE. Yes, Mr. Chairman. Federal agencies need to be encouraged and incentivized to help make power come online in a lot of different ways.

And finally, formulating Federal restructuring policy at whatever level it occurs needs to recognize there are many paths to success. The first panel highlighted that. There is no one sure way to restructure a market and so a "one size fits all" solution is clearly contraindicated in this particular industry.

Thank you.

[The prepared statement of Adrian T. Moore follows:]

PREPARED STATEMENT OF ADRIAN T. MOORE, EXECUTIVE DIRECTOR, REASON PUBLIC POLICY INSTITUTE

INTRODUCTION

It is household knowledge nationwide that California's electricity restructuring has proven disastrous. Under pressure to deregulate and lower electricity rates, state legislators acted hastily without understanding the issues at hand or the consequences of their actions, creating a restructured electricity market that was neither fish nor fowl—neither the old, regulated monopoly system nor a competitive, deregulated market. Now state leaders are again acting in haste and with partial understanding and moving the state towards a state-dominated if not state-run electricity system the likes of which is not seen outside of Eastern Europe. Meanwhile, Summer 2001 looms ahead, where the most optimistic projections show the state teetering on the verge of blackouts—the reality is those blackouts are a near certainty given current policy directions. In the end, California residents have been denied the benefits of competition and choice in electricity that residents of other states have enjoyed, and current policies look as though California rates will remain above national averages for years to come.

California Did Not Deregulate, and Why That Matters

Many consider California a poster child for why electricity markets cannot and should not be deregulated. But this is wrong for two reasons.

First, and foremost, California did not deregulate the electricity market, but rather “restructured” it, requiring far more state intervention in electricity transactions than existed before. In doing so, the law created a micromanaged market where suppliers of electricity have the ability and incentive to manipulate prices to their advantage, and utilities are forbidden to shop for better prices. It is simply not accurate to label California’s electricity reform “deregulation” when, for example:

- State regulators determine the prices customers pay for their electricity;
- Utilities are not allowed to seek out competitive contracts on their own, but must purchase electricity in a mandatory “power exchange” with bidding rules that require paying the *highest* bid price;
- The state determines what set of activities utilities undertake, such as requiring them to sell their electricity generation plants and buy electricity through the power exchange;
- Price caps and onerous market rules discourage new competitors from entering the market; and
- New regulatory strictures created by the restructuring law constrain business decisions on such matters as plant maintenance and transmission lines.

The past year of price spikes and the looming threat of blackouts result not from “unfettered free markets,” but from the political micromanagement and market distortions that restructuring wrought.

Second, dwelling on California’s failures instead of on states that have had considerable success in deregulating electricity, such as Pennsylvania, is like skipping the Superbowl to watch the last place teams work on new plays. States and other entities that have made effective and efficient use of deregulation should be studied for successful strategies, rather than California’s experience tarring deregulation with the brush of inevitable failure. Fortunately, despite news stories about a few states delaying their progress towards deregulation, most states are continuing to move ahead.

The Causes of Prices Increases are Very Complex, However Much We Want Them to be Simple

The simplistic story of why California’s electricity prices skyrocketed over the past year is that demand for electricity had grown equal to, and even beyond, the supplies of electricity available in the state. Between 1996 and 1999, California’s electricity demand grew by 5,500 MW (14 percent), eight times the 672 MW (2 percent) increase in electricity generation capacity added over the same period. Of course, these numbers do not explain *why* new electricity capacity was not added as demand grew, or why demand did not shrink as supplies ran short.

Even detailed studies of the California electricity market oversimplify the problem—usually highlighting about a half-dozen factors that influence prices. In fact, as the attached Figure (What Caused California’s Electricity Prices to Rise?) shows, a tangled web of factors led to price increases.

Many of the price influences in the Figure (the un-shaded ones) came about due to factors in other markets or natural changes in the economy, and there is little that policy makers can do to influence them. But many other price influences (the shaded ones) are shaped, and even created, by state policy decisions, most of them part of the restructuring plan. Notably, failure to provide incentives to build new power plants is *not* a failing of restructuring. Since the restructuring law passed in 1996 the state has seen an unprecedented growth in new power plants—after 12 years of no new plants at all, the last few years have seen nine new plants approved by the California Energy Commission. The problem is not that companies don’t want to build more plants, the problem is that it takes four to five years from initial application to starting operations—in other Western states it takes half as long.

The key lesson of this example, and of the attached Figure is that simple solutions are not possible—many different facets have to change for prices to return to normal levels. Policy alternatives open-ended enough to accommodate the interconnections between factors and resilient enough to accommodate changes in some or all factors may be able to bring electricity prices back to more normal levels.

Specific Pathologies of California’s Restructuring

California’s 1996 restructuring law was intended to bring about competition and customer choice in power generation, but wound up a bundle of compromises, getting unanimous approval only by offering something for everyone (legislators, utili-

ties, consumer groups, environmental groups, etc.), and creating a muddled, centrally planned market lacking equal opportunity for all participants, incentives for new firms to enter the market, and meaningful opportunities for customers to choose among service providers.

For a few years these flaws caused not catastrophe but only disappointment. Virtually no new firms entered the market, so few customers switched providers, and prices did not change much beyond the mandated 10 percent rate cut. Indeed, most people seemed to forget California had restructured the electricity market.

But the summer of 2000 changed that. For four years electricity demand had grown 14 percent with the state's population and the increasingly digital economy. Meanwhile, electricity supply had limped along to a mere two percent growth. The state had become a big energy importer, bringing in 20 percent of its electricity from neighboring states.

In 2000, as temperatures started to rise, demand for electricity threatened to outstrip supply, and flaws in the system created by restructuring became gaping fractures, unleashing a flood of woe. Wholesale prices rose dramatically, causing radical price spikes in San Diego where retail prices were no longer capped. Caps were quickly re-imposed in San Diego, but as the utilities were forced to pay far more for electricity than they were allowed to charge customers, their losses began to rack up to billions of dollars. Meanwhile, with prices capped, customers had no incentive to conserve electricity and thus moderate demand, and the state began to flirt with blackouts. Winter failed to bring sufficient relief, and California's crisis has continued to grow.

California's electricity restructuring embraced some vividly unique policies, such as establishing a mandatory, centralized market for all exchanges (the Power Exchange), vesting complete control of the grid in a centralized body (the Independent System Operator), and rejecting the messy, uncontrollable practice of bilateral forward (long-term) contracts between utilities and power generators.

A complete discussion of restructuring elements that have proven problematic, and in some cases disastrous, would be tedious, so I will touch on just five fundamental elements. That five substantive problem areas can be singled out is a lesson in itself—something as complex and dynamic as a competitive market cannot be planned and packaged in a piece of legislation. Attempts to repair the mistakes of restructuring can easily fall victim to the same hubris, rather than focusing on simplifying the rules and minimizing interventions and distortions so that market forces can work. Examining these five problem elements of the restructuring demonstrates a cataclysm of unintended consequences and an overall inability of the structure to adapt to changing market conditions.

A. Planning the Market—The Independent System Operator and Power Exchange—Participants who crafted California's electricity restructuring did not have much faith in the market process. Legislators were concerned about loss of control over the system and that customers would not understand it. The utilities came from a regulated monopoly culture and were not used to operating in competitive markets. Consumer groups are perpetually suspicious of market power and abuses by corporations. Environmental groups did not want customer choices to undermine existing conservation and renewable resource mandates. For all of them, restructuring meant developing a set of specifications for the market that would achieve the new, vaguely defined objective of competition, while retaining those elements of the old system deemed imperative.

Two characteristics stand out about the rules for the Power Exchange (PX) that restructuring put in place. First, it is a mandatory centralized market, with the private utilities required to buy and sell all of their power through the PX, and second, the bidding rules created a market-clearing price that aggregated prices upward.

The market was mandatory for several reasons. Restructuring architects wanted to be certain utilities did not tie themselves down with long-term contracts that would lock in current prices when everyone expected prices to fall. Regulators were also concerned that the market be transparent—everyone can see what is being bid and bought in the PX. They worried that a market where utilities could make contracts directly with power generators or could use alternative markets would make it difficult for consumers to see how power was being exchanged in the market. Unfortunately, reality has not lived up to the ideal. Data on bids and transactions take months to become available, and the information is often incomplete or aggregated. Nothing in the data on the PX Web site that helps consumers to choose among power providers.

The second noticeable fact about the PX—its bidding rules—arose from concerns similar to the first. In order to provide the transparency regulators sought, they enacted bidding rules to create a market-clearing price. Think of this simplified version of the rules. Suppose there are 12 power generators, each of which provides

10 units of electricity. Each day they bid what price they want to be paid for their 10 units of electricity the next day. Suppose total demand for electricity is 100 units. The PX then starts with the lowest bid and adds up the bids until it reaches 100 units (10 power generators). Since the PX governs all transactions between the utilities and generators, and pools them, the market-clearing price is the one that delivers all 100 units demanded—which is the *highest* of the 10 selected bids (if the price offered was lower, the 10th generator would not sell, and total demand would not be met). All sellers receive this highest bid, market-clearing price, and the utilities have to pay that price for all their electricity.

As long as supply is greater than demand, bids under this rule should be competitive. The two highest-bidding power generators' bids are rejected, so the generators have an incentive to bid competitively. When the PX was created, everyone assumed supplies of electricity would grow faster than demand as competition stimulated new entry into the market. But, due to other elements of the restructuring and existing regulations, market entry and increasing supplies did not materialize (more on this below). So, in our simple story, total demand rose to 120 units of electricity. Once that happened, power generators soon realized that all of their bids would be accepted *no matter what price they asked*. With a myriad of forces at work driving up wholesale electricity prices (again, more on this below), PX bidding rules allowed, and even encouraged, power generators to charge very high prices and make very large profits.

Meanwhile, the alternative to buying power in real time in the spot market is to contract for delivery of electricity at a specified price over a specified period—forward contracting. Forward contracts lock in a price, so if prices go up, the buyer has made a good deal, but if prices go down, the seller made the better deal. But both buyers and sellers often prefer to have some forward contracts to balance the risks of the spot market—uncertainty and volatility.

By requiring utilities to buy all of their power in the PX, the restructuring bill did not at first allow the utilities to enter into forward contracts. In 1999, the PX began to offer forward contracts, but the PUC would not allow the utilities to contract forward for more than five percent of their load. The PUC also would not allow the utilities to form forward contracts directly with power generators (bilateral contracts), but limited them to the PX block forward contracts.

Only in August 2000, well into the summer crisis, did the PUC relent and allow the utilities to seek bilateral forward contracts outside the PX. In December, FERC released the entire 40,000 megawatt (MW) load in California from the mandatory PX, granting utilities discretion to contract forward as much of their load as they deemed necessary through the PX block forward contracts or bilateral forward contracts. However, the PUC has yet to relax its restrictions on utilities' forward contracts.

The resistance to allowing forward contracts has several rationales. The arguments against forward contracting, especially bilaterally, are the same as those in favor of a mandatory PX. First, since the PX was intended to offer the perfectly planned market for real-time exchanges, there was deemed to be no need for forward contracts. Restructuring anticipated plentiful supply and a competitive spot market that would drive prices down. Allowing utilities to forward contract would probably mean they would lock themselves into high prices, and the state would wind up having to let them pass those higher prices on to customers. Second, bilateral forward contracts would not be transparent to consumers as are PX transactions, and thus would not feed into their choices.

But this is static thinking. As customers are given real choices of electricity suppliers, utilities have to factor those choices into their forward contracts as well as spot purchases. Utilities are obliged to accommodate the supplier choices of the customers in their distribution area. If they wind up with high-price contracts or too much load forward, there is no regulatory failure, just a mistake by the utility, for which their shareholders must pay. There is no need for a regulated pass through. And customers don't care about how the utilities manage their load; they will shop for price and ancillary services.

Price Controls

Prices are perhaps the most fundamental building block of markets, the mechanism by which information is carried through the economy, encapsulating data about costs and tradeoffs so vast that even today's computers cannot predict price changes. Put simply, prices help tell consumers when it makes sense to consume more or less of a good, and tell suppliers when to invest more or less in production.

Unfortunately, cutting and capping rates is almost irresistible to some politicians as they craft restructuring. It offers oft-illusory stability during the transition to competition, as well as an immediate "accomplishment" politicians can point to. The

architects of California's electricity restructuring were quick to jump on the bandwagon, severing prices from the market. The law mandated an across-the-board 10 percent rate cut, and created a Competitive Transition Charge (which came close to offsetting the cut) to finance paying down utility stranded costs. The caps on retail rates were set to stay in place for each utility until it had paid off its stranded costs, or 2002, whichever came first.

These price controls are the cause of many of California's current problems. They: a) discouraged new firms from entering the California market so customers have never really been offered meaningful choices among electricity providers; b) reduced incentives to invest in new electricity generation plants in the state or new transmission lines to import electricity, either of which might have alleviated the current electricity shortage; c) blocked all signals about electricity shortages from reaching customers, leaving them no incentive for voluntary and gradual demand reductions that might have minimized the current crisis; and d) created a wedge between wholesale and retail prices that led to billions of dollars in losses by state electric utilities.

By cutting rates 10 percent from the start, the law set a barrier to entry by new firms. Most people will not switch to a new electricity provider unless they are offered a significant price reduction. With rates already cut 10 percent, entering companies would have to offer electricity for nearly 20 percent less than the pre-restructuring price to get many customers, and that is hard to do right off the bat. Even worse, the law required new companies selling electricity to customers to charge the Competitive Transition Charge to help pay down the stranded costs debt. That added to the new sellers' costs, making it even more difficult to find a way to offer customers dramatic enough rate reductions to persuade them to switch companies.

The result protected the incumbent utilities, as few new companies chose to enter California's electricity market. Customers, expecting "deregulation" to bring a flood of marketing mailers and dinner-time solicitation calls to switch electricity providers, are rarely offered any choices, and today still get their electricity from the same company with the same service options as they always have. As of June 2000, only about 2 percent of customers in the state had switched providers, and many of them were industrial and large commercial sites.

Price caps also discouraged investment in new power plants in California. In a free market, as demand expands, prices will rise until supply expands as well. The rising prices tell producers it is time to add capacity and give the ones who best estimate future demand better returns on their investments. But with price controls in place, no such signals are sent to suppliers. Instead, they can invest the same money in building power plants elsewhere where there are no price caps to minimize their return on the investment. And electricity plants have unique risks—some plants will not run all year, only going online when demand reaches high levels. Those plants have to cover a whole year's costs (fixed and variable) in those limited hours of operation, and prices must go up at such times of high demand to balance things out. But that balance is knocked flat by controls that don't allow prices to fluctuate with supply and demand.

In simple terms, the reason for the current electricity crisis in California is that demand grew while supply remained flat. As demand exceeded supply and prices were capped, limiting conservation, the state started to experience shortages. Prices that rise as demand rises not only signal suppliers to add production but also tell consumers they may want to consume less. Population and job growth drive up the total statewide demand for electricity, even if homes and businesses are each using about the same amount they always did. If that makes prices go up, consumers will look for ways to conserve until supply increases and brings prices back down.

Discouraging New Power Supplies

California is not an easy state in which to build a power plant. Licensing procedures and rules are expensive and time-consuming. Environmental regulations are among the most stringent in the nation, and power plants are unpopular neighbors, often sparking resistance from local residents. In California, plants often take three to five years from concept to operation, while in other Western states the process can be as short as one year.

Thanks to these barriers, in 1996, as restructuring was debated, California had not seen a new power plant built in a decade. Yet the state still had excess energy generation capacity. Indeed, one reason for restructuring was to let market incentives determine capacity decisions. The architects of restructuring assumed that competition and profit opportunity would bring new power plants to keep electricity supply well ahead of demand in spite of the difficulties state regulations present. And, despite restructuring's failure to allow a competitive market, restructuring did stimulate new capacity—between March 1998 and the end of 2000 the California

Energy Commission had licensed nine new power plants that will generate over 6,000 MW, about 16 percent of the state's average daily load.

But these new plants are so slow in coming—the first won't be online until mid-2001—they won't help solve the current shortage. The long delays in adding capacity in California had set the state on the road to shortages long before restructuring. Since 1988, the state energy commission has been predicting that demand would catch up with and surpass supply. But state leaders did nothing to change the barriers that discouraged new companies from building new power plants. At first, discussions of deregulation may have discouraged new investment, since private companies did not know what kind of law the state would pass. But restructuring ended that uncertainty and companies saw an opportunity to make money from growing demand in California. The new plants they are now building will likely assure that the current shortage will not persist.

Government-Owned Utilities Are Protected from Competition, but Allowed to Profit from it.

Government agencies generate almost a quarter of the electricity in California (see Figure 2) and thus are an important part of the state electricity market. Restructuring allowed municipal utilities (munis) to choose whether or not to enter the competitive market. So far they have not chosen to do so. Instead, munis and other government power generators took advantage of the PX and ISO to sell their excess power and earn considerable profits in the process.

In 2000, government generators made big money from the wholesale price spikes that caused the state so much pain. State agencies and local water authorities sold their excess power into the grid—the State Water Project, for example, made \$23.6 million in profit from selling power at high PX prices. Large munis followed suit—the granddaddy of them all, the Los Angeles DWP made close to \$200 million in profits. Even small cities like Redding, which earned \$8 million in profits, took advantage of the situation.

Some of the power that munis sold came from the Bonneville Power Administration (BPA), federal hydropower that is some of the cheapest electricity in the nation and is offered first to government utilities before private utilities can buy any. California's munis bought all of this "preference power" they could and resold it into the PX and ISO for five to ten times what they bought it for. BPA itself sold power into the California market and in 2000 earned \$207 million in profits (a 116 percent increase over the previous year).

Because they have made money during the crisis, while the private utilities have run up huge losses, munis argue both that deregulation is a bust and that government ownership of utilities is superior to private ownership. But the munis' sunny days are an artifact of restructuring's rules. Unlike the state's private utilities, munis were not required to sell off their generation plants, were not forbidden to use forward contracts to hedge against price increases, and they had the option of buying from and selling into the PX. Ironically, restructuring wound up shackling the state private utilities while leaving the munis free from any state restrictions.

In fact, evidence indicates that munis are less efficient than private utilities and could benefit from competition. Munis' average charges for residential customers are slightly lower than the average for private utilities but a bit higher for industrial customers. But munis' average total cost for electricity generation is 10 percent lower than for private utilities, thanks to a batch of subsidies. Since munis' rates are not 10 percent lower, the difference is waste and bloat. A number of studies have shown that private electric utilities are more efficient than munis.

As California and other states continue to move toward competitive electricity markets, the distortions caused by government utilities' exceptions and subsidies have to be rectified. Federal preference power is owned by all U.S. taxpayers, but since it is offered with preference to munis, it serves to transfer wealth from customers of private utilities to customers of munis. The fight to make federal hydropower equally serve all U.S. taxpayers has been long and contentious, but recent events in California once again highlight the need for such reforms.

Also, a state's electricity market cannot be truly competitive if customers in many of its largest cities are not allowed to choose their electricity provider, and when tax policies and regulations give government generators advantages over private ones. As restructuring moves forward, munis should be integrated into the competitive market.

Divestiture—Determining Industry Structure from the Top Down

Before restructuring, the state's electric utilities were vertically integrated, meaning they owned all elements of the system—generation, transmission lines, and distribution systems. Fearful that incumbent utilities would give their own power

plants favorable access to the grid and thus stifle competing power generators, restructuring's architects created strong incentives for utilities to sell off (divest) their power generation plants. The utilities responded by quickly selling their natural gas power plants, though, due to resistance in court by environmental groups, their hydropower plants have not been sold.

Today, many state leaders have changed their mind about utilities selling the rest of their power plants—Gov. Davis has proposed forbidding the utilities to sell any more power plants, and a bill to restrict utility asset sales was introduced in the state Assembly. These proposals make the same underlying mistake as the original decision to get utilities to sell their generators, assuming the future of the market is known and there is a “correct” industry structure for that known future market.

Deciding what assets an industry should or should not own requires knowledge about the future, knowledge public officials don't have. Regulators find it easy to theorize about possible bad behavior by vertically integrated utilities in a competitive market but are less able to predict possible harm to the market from dis-integrating utilities. The policy flip-flop of California's leaders on divestiture, as market conditions have changed, brings home the consequences of dictating market structure. There are many advantages to vertical integration—reducing transaction costs, economies of scope (producing multiple goods more cheaply), improved coordination, and hedging against risks, to name a few.

Public policy should not dictate industry structure. Utilities can best make their own decisions about what assets they need to own to be competitive. When deregulation aims only to make electricity generation competitive, regulators overseeing utilities' distribution operations will have to guard against utilities favoring their own power plants over those chosen by electricity consumers. Effective rules linking customer supplier choices with requirements into the grid will make such oversight easier.

STARK CONTRASTS: SUCCESSFUL DEREGULATION BY OTHER STATES

In the rush to condemn electricity deregulation as the cause of California's current woes, many observers have overlooked the success stories in other U.S. states and worldwide, as well as the well-crafted plans of states like Ohio and Texas. These examples show that California's chaos is not the result of deregulation, but rather the consequence of their politicized restructuring process.

Indeed, the Center for the Advancement of Energy Markets has ranked state deregulation plans according to how effective they are in transitioning from monopoly to competition and customer choice. In July 2000 they ranked *California 16th in the nation*, with many states ranking lower only because their deregulation plans were incomplete.

At the top of the rankings is Pennsylvania, where customers were given meaningful choices between electricity providers, new companies were encouraged to enter the market, prices have gone down for those who shopped for price, and “green (including renewable) power” has achieved a respectable market share. Most importantly, Pennsylvanians reveal in surveys that they are happier with their electricity service than most people in the nation. Deregulation—done right—does work and does benefit consumers.

Pennsylvania, which passed deregulation legislation at the same time as California, has fully implemented deregulation for all customers. Pennsylvania's customers have seen average prices decrease and an increase in service options, including “green power.” Of the states that have deregulated wholesale and retail electricity markets, Pennsylvania has had the highest rate of customers switching to alternate generation providers, and Pennsylvania's customers express the highest satisfaction with their electricity services in the United States. Pennsylvania achieved this deregulation success through market-based default (or standard offer) prices, non-mandatory divestiture of generation, accelerated phase-in of all customers, and the use of financial instruments and regional markets, all of which encouraged alternate providers to enter the market and create real competition. Other states with early deregulation, such as Massachusetts and Rhode Island, did not experience Pennsylvania's success, and have recently adopted policies that have succeeded in Pennsylvania (such as higher default prices to encourage entry).

Other nations began experimenting with electricity deregulation before the United States, most notably the United Kingdom, Australia, Argentina, Norway and New Zealand. The United Kingdom's process has led to a 26 percent average price decrease and improved satisfaction with electricity service. Australia's national structure, with states responsible for deregulation decisions, resembles the structure of the United States more than the United Kingdom's centralized government effort.

Since 1991, Australia's customers have experienced an average price decrease of 24 percent.

Texas also appears poised to succeed in realizing the benefits of electricity deregulation. While its legislation went into effect only in June 1999 and its pilot program to test the process starts in June 2001, many view Texas as a blueprint for deregulation success. It has incorporated the negative lessons from California with the successes of Pennsylvania, the United Kingdom, Australia and elsewhere to craft a process that gives new providers real incentives to enter and provide competitive services at lower prices to Texas consumers. The Texas legislation stipulates a "price to beat" or default price that is six percent below the January 1999 average price; this price is low enough to generate price decreases for consumers but high enough for market entrants to see profit potential. The "price to beat" then becomes a retail cap that is effective for only five years. Also, Texas has not mandated full generation divestiture, but has followed the Pennsylvania model of restructuring studies, with the incumbent utility retaining no more than 20 percent of the generation capacity in their service area. The full retail market is set to open in January 2002. Finally, but perhaps most importantly, Texas will not establish a centralized electricity market like California's Power Exchange, but will instead allow buyers and sellers to transact how they see fit through for-profit financial markets. This flexibility will enable all market participants to limit their risk (and their consumers' risks) of energy price volatility, and to be creative in devising financial instruments to manage that risk.

California's experience is in no way representative of the consequences of deregulation; in fact, when done well, these success stories show just how much benefit both consumers and innovative sellers can gain from electricity deregulation. Electricity deregulation can deliver consumer choice, consumer savings, and a business climate that encourages entrepreneurship.

RECOMMENDATIONS

California's electricity crisis requires policy alternatives that balance immediate approaches to ensuring sufficient supplies of electricity and solving the utilities financial crisis with longer-term approaches that will bring California to a competitive market with customer choices, lower prices, and a more reliable power supply.

There is no easy way out of the current crisis—the forces acting on the market are very complex, as is the electricity market itself. Policy makers must act quickly, but not in haste, avoiding interventionist policies that lock in yet another round of unintended consequences at some future date. With a little time to learn from the mistakes of the initial restructuring and from more successful deregulations elsewhere, the state's leaders can craft policies open-ended enough to accommodate the complex interconnections in the market and resilient enough to accommodate changes in market conditions. To that end, we offer the following policy recommendations.

Recommendations for the State Level

1. *Articulate a vision of moving toward competition that will alleviate concern of regulatory intervention.* Too many state leaders are offering isolated policy ideas, would-be silver bullets, and conflicting proposals that fail to tell the market what direction policy is moving and what endstate is sought. Inflammatory, populist rhetoric by state leaders replete with threats of police action and takings only exacerbates uncertainty about California's electricity market. A clear and well-articulated endstate and set of goals will help policy makers formulate coherent and coordinated policy proposals and reassure the public and the market.

2. *Change the law to make the PX voluntary.* A spot market is a necessary component of the overall electricity market. But centralized mandatory pools bring to the market perverse incentives and rigidities that create distortions and an inability to adapt to changing market conditions. As a voluntary spot market, the PX can become an independent competitive exchange and develop bidding rules that attract both buyers and sellers.

3. *Help alleviate the barriers to long-term power contracts.* State leaders have acknowledged that the utilities need to add forward contracts to their portfolios to hedge against wholesale power price fluctuations but have not developed adequate policies to help make forward contracts happen.

The governor's 14 January proposal to have the state enter into forward power purchase contracts is not wise. The state would be taking on futures risks with no experience or skills in evaluating those risks, and putting taxpayers at risk for its mistakes. One unavoidable lesson of California's electricity restructuring is that policy makers are ill-equipped to accurately predict how markets will evolve.

State leaders could achieve similar results by offering state guarantees to back utilities' initial forward contracts. This would alleviate the credit risk that is driving up forward prices offered to utilities, but dilute the taxpayer's risk and let the utilities negotiate the contracts with their experience, expertise, and incentive to prognosticate correctly.

State leaders should immediately convene a summit of leaders from state agencies and cities that generate electricity for resale to explore opportunities for cost-based forward contracts with the utilities. Government agencies control about one-quarter of the state's power generation and resell about 40 million MWh each year. Though their loads are very seasonal, if even 10 to 20 percent of that load could be forwarded to the utilities at cost, it would help push forward prices down and lever additional contracts.

4. *Create a plan for phasing out price caps.* A market cannot work without market prices—consumers don't know when to reduce consumption, and suppliers don't know when to increase production. In the short run, price caps only guarantee that utilities will continue to bleed red ink, suppliers will look for other markets in which to sell, and consumers will have no incentive to conserve electricity. Putting a stop to further losses will also make it possible for the utilities to purchase power on their own.

Gradually, but predictably, raise the price caps. Convene a working group to create an initial schedule and revise the schedule periodically as market conditions change.

Tie rate cap increases to milestones in accomplishing other policy changes that increase competition and customer choice in the market and reduce utilities' market power. If other policy changes are successful in allowing market entry and new competitive choices for consumers as well as increased electricity supply, the timetable to remove price caps can be moved up.

Meanwhile, implement a system to guard against exercise of market power in utilities' customer charges. Until consumers have options in the face of high prices or bad service from utilities, regulatory oversight is necessary.

Encourage utilities to implement real-time pricing and metering so that consumers can adjust their use of electricity as prices change. Implementing real-time pricing and metering can also justify accelerating the schedule for removing price caps.

5. *Accelerate completion of new power plants with a constructive approach to licensing and enforcing environmental rules.* Restructuring spurred a level of investment in new power plants not seen in decades in California, but the permitting and construction process takes years longer than in other Western states. The problem is not as much the standards as how they are enforced. State regulators do not care if power plants get built, only that the standards are followed. State leaders must get state regulators on board with a new, constructive approach that works with developers to get power plants built without violating the standards. In an 8 February Executive Order, Governor Davis embraced this approach to speeding up expansion of California's electricity supplies.

6. *Integrate municipal utilities into the market as it becomes competitive.* California's electricity market will not be truly competitive if customers in many of its largest cities are not allowed to choose their electricity provider. As restructuring moves forward, municipal utilities should be integrated into the competitive market. Over the long run, state leaders should challenge the federal government to end the inequities and wealth transfers that federal subsidies for municipal utilities and preference distribution of federal hydropower inflict on California residents.

7. *Do not dictate utility industry structure.* Requiring the utilities to sell their power plants turned out to be a mistake when market conditions changed in ways policy makers did not predict. Forbidding utilities to sell power plants repeats the same error. Policy makers do not know the future of the electricity market and should not lock the utilities into any arbitrary structure based on the exigencies of the moment. Ensuring that utilities do not favor their own generation plants is better served by developing good rules to govern how customer choices are reflected in grid loads, by encouraging distributed generation, and ultimately competitive electricity distribution systems.

8. *Work out a deal with the utilities to split their current losses between their customers and their shareholders.* Since state policy is really to blame for the current crisis, customers and the utilities will have to share the costs, and utilities should not be able to take back all the losses from customers once rates are uncapped. To spread out the portion that will be passed on to customers, the state might back a securitization (as was done with the utilities' stranded costs).

Recommendation for the Federal Level

1. *The federal role must be limited.* State law created California's problems, and the bulk of any resolution of the crisis lies with state law as well. FERC has done a good job of setting California up for success, making the changes in wholesale market rules necessary to return California to the path to a competitive electricity market. Current federal policy allows the states to pursue deregulation their own way and at their own pace, and for most this has proved beneficial. Yet, I recognize the pressure on Congress (especially the California delegation) and the Administration, to do something!

2. *Ensure a well-functioning wholesale power market.* FERC has done a great job of allowing a functioning wholesale electricity market to evolve. To build on that success, it is vital that the federal government address, as much as it can, disincentives to invest in transmission lines, which are increasingly crucial to the regional movements of electricity on which a competitive electricity market depends. Current rules limit the rate of return on transmission lines to a level that does not compensate for the high risks that political uncertainty impose on transmission investments. Allowing higher rates of return until all parts of a region are deregulated would encourage investment.

3. *Reform policies for selling federal hydropower.* BPA's role in the California market has highlighted how absurd and distortionary are the policies for selling its power. In the Northwest, BPA power selling policies are so skewed it makes sense for some factories to shut down and resell their electricity. In California, some residents benefit from low-cost federal electricity while others do not, though as taxpayers they all ought to have equal rights to it. The only sensible policy for selling this electricity is in open auction to any viable purchaser. And yes, I recognize this recommendation is a political buzzsaw, but it is still right.

4. *Federal agencies need to do their part.* In many small ways, decisions by federal agencies have significant impact on California's electricity market. I know of a case where the Interior department has for years delayed a land transfer that would allow a project storing off-peak wind power for peak periods, even though Interior supports the land transfer—its just bureaucratic inertia. In another case, logging and road restrictions in California's National Forests restrict the collection of biomass (dead wood, underbrush, etc.) used to power 31 power plants in California that generate nearly two percent of the state's peak electricity demand—enough to make the difference between a Stage 3 power alert and blackouts. All federal agencies need to work within their means to help the growth California's electricity supply, and they need not compromise other policy goals to do so.

5. *In formulating federal restructuring policy, consider the many paths to success.* California's failure is unique—other states have hit bumps in the electricity deregulation road, but relatively minor ones. Pennsylvania shows that deregulation can succeed, and Texas shows the process can be refined yet further (though we don't know the outcome there yet). The bottom line is that the move from regulated monopoly to competitive markets is an evolutionary one, with no single right path, and no static end-state to arrive at. Policies have to be open-ended and flexible, and balance transitional interventions with longer-run removal of market restrictions. And patience is a virtue here—markets take time to evolve, if we will wait for them.

Mr. BARTON. Thank you. Last but not least, we have Mr. John Fielder, who is the Senior Vice President for Regulatory Policy and Affairs for the Southern California Edison Company, a company that has not only felt the pain, has actually lived the pain and is living it today. We welcome you. Your statement's in the record and you are recognized for up to 8 minutes to elaborate on it.

STATEMENT OF JOHN R. FIELDER

Mr. FIELDER. Thank you, Chairman Barton, Congressmen. I wish I could say it was a pleasure to be here, but right now it is not a pleasure to be anywhere. I mentioned earlier maybe it is even better to be here than in Sacramento these days because it is a circus in Sacramento.

This is a mess. I am not going to spend a lot of time reviewing how we got here. I think the prior panel and the prior speakers have kind of touched on most of the issues. I would like to spend

the time I have talking about where we think we ought to go to get out of this mess.

I think everybody agrees that we made serious mistakes. I say we in a collective. There is a bit of a misperception that the utilities were kind of behind deregulation in California. I don't want to go back and do finger pointing too much, but the Public Utilities Commission started the deregulation process over the objections of the utilities in 1994, and we wrangled for about 2½ years before we ever got to the legislature with AB 1890. The utilities were happy being vertically integrated, noncompetitive utilities. We have been monopolies for a hundred years. We thought it worked fine.

The compromise that came about in the legislature was only in reaction to the PUC's action, and I think a lot of the problems with 1890 and a lot of the problems with the way we implemented it was the fact that it was a compromise and somebody mentioned we had all the parties at the table, and you know what that looks like when you get done with a several month process that turns out to be a compromise.

Most of the problems need to be resolved at the State level, and I think there are 1 or 2 things that can be resolved or helped at the Federal level looking forward. I mean, this is such a mess that some of the options that we might have had open to us going forward are gone.

The first thing that the State needs to do is to make the utilities financially viable. Now, in the rhetoric of California, what this implies is rate increases and it does mean raising the retail rates for customers that have used the power that we have delivered to them. We have run up debts of about \$5 billion, \$5.5 billion dollars.

Mr. BARTON. We is just your company?

Mr. FIELDER. Our company. I am sorry, I am talking about Southern California Edison now. PG&E has got its own problems. They have actually run up a little more than we have and that has happened in 8 months. Eight months ago we were a financially healthy company. We were a single A-plus rated company. We had good bond ratings. We were profitable. Today, our shareholders have lost two-thirds of their value. We have had to suspend the dividend for the first time in the company's 100-year history. We have had to lay off over 2,000 employees, cut back on service, minimize investments in the distribution system. It has just torn this company asunder.

On a going forward basis we have to raise rates to amortize some of this \$5 billion that we have paid out and borrowed on customers' behalf to deliver energy. Now, a lot of people think that that is going to be a big rate increase. Let me tell you that with the plan that we have proposed to amortize it over 10-years and using some bonds that would be issued by the State, it is less than a penny a kilowatt hour to amortize that past debt. That would enable us to pay the bills that we haven't been paying. We have over \$700 million in bills. We haven't paid generators. We haven't paid qualifying facilities because we are out of cash. Our credit lines are borrowed to the max and we don't have any money and it is kind of like when you used all your credit cards and now it is time to pay the bill, there is no money there to pay, and we can't borrow any more.

So we need to raise the rates to amortize the past undercollection. That will get us our credit lines back. We can then borrow money as we have for years and try to procure power and keep the utility in balance with the demands that the customers are placing on us. One of the things that has happened in the last 2 weeks is the State has passed a law now that says they are going to procure the power for customers that is over and above what the utilities can provide through their own generation and their own contracts.

So the State is in the power business. The State Water Resources Board is acquiring power today. They are trying to do it under long-term contract. They have not got very much of the supply under long-term contract. They are spending, as somebody mentioned, about a billion dollars a month. I think that is low, and you know even with a \$10 billion surplus in the State, they will run through that without some other market reforms in just a few weeks or a few months.

The second thing we need to do is we need to get off the spot market, as people have said. We need to get into long-term contracting. The State has taken that over. We had proposed that the utilities should do that. It is a little bit of a revisionist history, some of the stuff that was said in the earlier panel.

We saw as early as 1998 the risk that you could have with a spot market. In the summer of 1998 we had spot prices run up to prices that we had never seen. Now, they only stayed there for a few hours or a few days and then came back, but in the spring, in March 1999, we actually applied to the Public Utilities Commission to get authority to do bilateral contracts and get off of the spot market, even though this was inconsistent with what the PUC's policy was. That application was opposed by virtually everybody in the State, generators, marketers, energy service providers, big customers, small customers, because it was kind of the mantra that we are trying to get the utility out of this business, and if you tie up long-term contracts to supply and get lower prices than what they think the competitive market will yield, we won't have a competitive market, we won't have direct access.

So that mentality was there early and in spite of our—over the last 2 years we have tried seven times to get authority to do bilateral contracts and not until last summer, when the horse was out of the barn by then, were we given the authority and even then it was with a lot of strings attached.

What bilateral contracts we were able to enter into we had canceled because we are not creditworthy anymore. So the State is basically in the power procurement business. For how long, we don't know.

The third and fourth things that the State needs to do, and they are finally getting around to this, is we do need to change the permitting processes and put some more incentives in place to get new generation built in the State. When we started this deregulation process, everybody thought the common wisdom and all the forecasts were that we had 30 percent surpluses. So when we started this thing in 1994-95 there was a surplus of generation and I think that gave people confidence that we wouldn't run into the problems we had. We misjudged it. Demand grew more than what anybody thought and we are now short and we need a crash program, and

the legislature is about ready to and has done a lot to provide incentives for generators, to streamline the permit process, to put some better bureaucracy behind the environmental permitting process and hopefully get some generation online in the near future. Right now we don't expect to get more than about 1,000 megawatts before the end of 2001. Most of that comes after the summertime. The forecasts are, and the CERA report that you mentioned, Mr. Chairman, is forecasting, and I think probably conservatively, 20 hours of rolling blackouts sometime this summer and it is just the fact of the physics.

The other thing that we need to do is we need to move on the demand side and really increase the awareness and the conservation ethic in the State. We have spent hundreds of millions of dollars, billions of dollars over the last 10 years on energy efficiency. Commissioner Wood or somebody mentioned that the State, the utilities didn't do a good job of energy conservation since this market became deregulated or restructured or screwed up, whatever you want to call it, but the fact of the matter is that another policy of the Public Utilities Commission was to get the utilities out of the energy conservation business, out of the energy efficiency business. They wanted to turn it over to the private industry so that utilities were basically cut back in their role of delivering energy efficiency.

We think the utilities are the best place to deliver energy efficiency. We have done it for 10 years or more and when you disburse that role to the marketplace that is disorganized and has its own provincial financial interests at stake, you don't get the energy efficiency that you are paying for.

Last, let me just say with respect to the FERC, and I know this is not popular, but we need some type of respite to work ourselves out of this from the high volatile spot prices that we are seeing. There is no new supply that is going to be in the market in the next few months. We can't keep paying 250, 300, \$400 a megawatt for power. There is just not enough money in the State to keep paying those kinds of prices. We need to work out some kind of policy with FERC and the generators that gives us a temporary respite, whether it is a cost-plus type cap, as Mr. Radanovich suggested, or some other mechanism that gives us some breathing room because we are not going to be able to get out of the mire we are in if we have to keep paying those high spot prices.

I will stop there and will answer some questions.

[The prepared statement of John R. Fielder follows:]

PREPARED STATEMENT OF JOHN R. FIELDER, SENIOR VICE PRESIDENT, SOUTHERN CALIFORNIA EDISON

Good morning. I am John R. Fielder, Senior Vice President of Regulatory Policy and Affairs for Southern California Edison. I appreciate the opportunity to testify before you today on the problems which threaten not only California's electric system, but the economic well-being of the state and potentially the entire country.

Eight months ago, my company was financially healthy. Our credit rating was A+ and our market capitalization was approximately \$6.5 billion, based on a share price of \$20. Today, our credit rating is deeply speculative grade or "junk." We have temporarily suspended payments for borrowed funds totaling \$638 million. In addition, we also deferred making power purchase payments totaling approximately \$730 million. Our stock price has dropped from a 52 week high of \$28.50 to a low of \$6.25, but has risen recently to approximately \$12. We have eliminated common dividend payments to our shareholders for the first time in our 100-year history. Not by coin-

cidence, California has endured 30 straight days of Stage 3 Emergency alerts, the most serious level leading to rolling blackouts.

Southern California Edison has found itself in a precarious situation where we had to buy wholesale electricity at artificially high prices and resell at artificially low prices. As a result, we incurred \$4.5 billion in undercollections as of the end of 2000.

We initially financed this massive revenue shortfall by borrowing in unprecedented amounts. However, we have now exhausted our credit, and have limited cash reserves. As a result, we have suspended payment for power and some of our outstanding debts. We are implementing major cost reduction measures totaling nearly half a billion dollars annually, which will reduce our workforce by approximately 1850 positions and limit critical investments in the electric system. If sustained, these reductions in staff and operating budget will certainly jeopardize the reliability of our system and our ability to adequately serve our customers.

These measures are not enough, however. With the widening gap between wholesale and retail prices, even the most drastic cutbacks we could possibly make would only generate enough cash to buy another few weeks' worth of wholesale electricity. Last January, in response to seller concerns about the creditworthiness of the state's major utilities, the California Department of Water Resources began buying power in the wholesale markets in an effort to avoid massive blackouts. Later that same month, California approved the issuance of \$10 billion in bonds to finance future purchases of electricity.

During this past year, California has seen wholesale electricity prices skyrocket. In 2000, California paid nearly \$21 billion more for wholesale electricity than it paid the year before—a nearly fourfold increase. In 1999, the bill for areas served by the Independent System Operator (ISO) was \$7.4 billion; in 2000, it rose to \$28 billion.

As staggering as this increase is, it does not reflect the true cost of the electricity crisis to California. The high prices we have been paying have not ensured adequacy of supply. Power emergencies have become an everyday occurrence. There are several power plants under construction or in the permitting stages in California, but not nearly enough for the state to pull ahead of the current supply shortage—not to mention the substantially higher demand anticipated next summer. Neither is there sufficient power to sustain the state's economic growth. Without dramatic action to accelerate the provision of new supply to the market, the problem has the potential of continuing for years.

However, the problem is not entirely one of supply shortage. Ironically this winter, during a time of relatively low load, we experienced the well-publicized rotating blackouts in Northern California on January 17 and 18. In addition, both we and PG&E were forced to repeatedly curtail "interruptible" customers—those who agreed during a supply crisis to a limited number of interruptions in exchange for lower rates. These customers include schools, small businesses and larger manufacturers. While the California Public Utilities Commission (CPUC) has decided to suspend the fines for this program and make it purely voluntary, this has increased the likelihood of rotating blackouts.

The shortfall this winter has been caused both by problems in the California market structure, and worries about the creditworthiness of the California utilities. As a result, generators have decided to either not run their plants or send their supply elsewhere, creating artificial shortages and the constant threat of more rotating blackouts, even when there is no shortage of supply.

How did we get here? What has gone wrong? No participant in this crisis is free of blame: Everyone can now see that the market structure adopted in California's electricity restructuring is terribly flawed, even though the intent was to introduce competition and ultimately lower prices for consumers.

The Federal Energy Regulatory Commission (FERC) over-relied on competitive markets to control consumer prices, even in the face of overwhelming and incontrovertible evidence that California's market was dysfunctional, needed significant repair, and was producing prices that were "unjust and unreasonable".

The CPUC either refused or significantly restricted our ability to purchase power in forward markets or outside the California Power Exchange. Through seven different filings made with the CPUC over the course of two years, my company has consistently asked for authority and more authority to enter into such contracts. Once the CPUC granted such authorization, they did so only reluctantly and imposed significant restrictions on our ability to do so.

All of us, including the utilities, were not as insightful as we should have been about the way the market would work and the way demand and supply would get out of balance in the California economy. Generators and other suppliers took advantage of a situation that obviously gave them significant economic gains.

Everyone involved, private companies and public agencies, undoubtedly believed they had good reasons for what they did. Predictably, there has been a lot of finger pointing and casting of blame. None of this fixes the problem, however; and the longer it goes on, the deeper the crisis becomes. What is needed now is strong and decisive leadership directed to solving the problem.

What needs to be done? At the state level, California officials need to take a combination of actions including raising rates, finding ways to finance both the past and future utility undercollections, and other actions to reestablish the creditworthiness of California's utilities. This is critical, because the reality is that the electric grid requires substantial capital investment for modernization and expansion. Financially crippled utilities will not be in a position to make the required investment that is critical to the health of this vital infrastructure industry. Furthermore, increased rates similar to those implemented in neighboring states will send the appropriate price signals to consumers and encourage conservation.

California officials, working in cooperation with federal regulators, need to implement market structure reforms, including reduced reliance on the spot market by encouraging long-term contracts. New methods of compensating peaking units, through bilateral contracts with buyers or the ISO, are needed so these plants can recover their costs without inflating the overall cost of generation. The state also needs to consider ways to streamline the siting of new plants.

While there is much that California can and should do, there is also a clear need for immediate federal action. Under the Federal Power Act, only the federal government has authority over wholesale rates. Clearly something must be done about current wholesale rates. The FERC found the rates in the California market to be unjust and unreasonable on November 1, 2000, and prices have only gone up since then. The law unequivocally requires that FERC set just and reasonable rates; the courts have made clear that FERC may depart from cost-based pricing and permit market-based pricing only where it finds that the markets will restrain prices to just and reasonable levels. The FERC cannot continue to rely on an overly doctrinaire approach to competitive markets when the markets are not sufficiently competitive to control prices and ensure fair rates.

We believe that the imposition of temporary cost-based price caps or load-differentiated price caps is fair to both consumers and sellers. Those sellers who truly have high costs will be allowed to recover those costs, including a reasonable return on their investment, but only when their high priced power is needed to keep the lights on. We recognize that price caps may be only a temporary solution. However, longer term solutions take time, and immediate relief is needed now.

In conclusion, I would like to thank the Subcommittee and you, Chairman Barton, for holding this hearing. We are working hard in California to develop and implement long-term solutions to the problems in our wholesale electricity market. But we cannot do it alone. Active and attentive leadership is needed at the federal level to ensure that the promise of reliable and affordably priced electricity is available to all citizens of California and the West. Nothing short of the well-being of our citizens, our economy, and the future of competitive electricity markets are at stake.

Mr. BARTON. Thank you. The Chair recognizes himself for 7 minutes. Right now the State of California, are they directly purchasing power, Mr. Fielder?

Mr. FIELDER. Yes, sir.

Mr. BARTON. Are they purchasing it on the spot market or the long-term market or how are they purchasing it?

Mr. FIELDER. I believe they are purchasing most of it on the spot market. They are trying to enter and negotiate long-term contracts with suppliers.

Mr. BARTON. The power exchange as it existed is gone, is that not correct?

Mr. FIELDER. That is true.

Mr. BARTON. So what spot market are they looking for power in?

Mr. FIELDER. Well, they will go to a generator and ask for supply to be delivered tomorrow.

Mr. BARTON. So they can go to anybody in the country and anybody in country can come to them?

Mr. FIELDER. Yes, sir.

Mr. BARTON. So it is an open market now, but it is a single buyer and it is the State of California.

Mr. FIELDER. Let me clarify. Whatever the Department of Water Resources is not able to acquire for the day's load, the ISO will continue to go out and do purchases like they have been doing to keep the lights on.

Mr. BARTON. So conceivably, if there are no transmission constraints, and there are transmission constraints both regionally and nationally, but if we had a perfect transmission system, then very conceivably an open market like the State of California is engaged in you could very quickly see these wholesale prices come down if you had a larger national supply sufficient enough that the demand didn't exceed it in California. Is that—

Mr. FIELDER. I think I would limit it to a regional supply. It is not very practical to ship power from—

Mr. BARTON. Because of the transmission constraints.

Mr. FIELDER. Not because of the transmission constraints but because of the physics. By the time you generate power in Virginia and ship it to California, the losses eat up all the power.

Mr. BARTON. What would happen is Virginia would wheel it to Tennessee, and Tennessee would wheel it to Arkansas, and Arkansas would wheel it to Oklahoma, and we would just be doing tumble wheels until it all of the sudden got out there.

Mr. FIELDER. When you get on the west side of the Rockies, if you didn't have any transmission constraints, then you could deliver power from anywhere in the western grid to California customers and—

Mr. BARTON. Which is the ultimate goal of the national restructuring debate, which admittedly we don't have that now.

Mr. FIELDER. Right.

Mr. BARTON. I want to go to Mr. Esposito. There was a lot of discussion in the first panel and some of our questioners about market manipulation and just and reasonable pricing, gaming the system. Would you like to comment on that, since Dynegy is one of the companies that might have engaged in such behavior had such behavior actually occurred?

Mr. ESPOSITO. Thank you, Mr. Chairman. I certainly would. I am the designated bleeder here. We are an extremely competitive company. We are in there to make some money and we are not going to apologize for that. On the other hand, when we hear that we have been out gouging or manipulating markets we take great umbrage at that.

I think if you look at the FERC report that was issued the first of February, a staff report by people who had no dog in the hunt, by people who audited 60 percent of the outages—now you don't usually audit anywhere near 60 percent of anything when you go do an audit—that audit shows that we and the other so-called out-of-state generators ran our plants much harder than they had been run in prior years. There is absolutely no evidence of withholding. In fact, we went out of the way to keep the plants running. We had a pump go down at one point and went to South America to find a pump. If we wanted to withhold, we could have just sent the pump out to get rebuilt and waited 3 months. So the real evidence is absolutely contrary to that.

As far as the market itself——

Mr. BARTON. Well, the first—this FERC report, is that a public document?

Mr. ESPOSITO. I have got it right here, Mr. Chair.

Mr. BARTON. The fact that you have it doesn't necessarily mean it is a public document. We have learned otherwise over the years.

Mr. ESPOSITO. This was a report that was issued at the Western Governors Association meeting in Portland. It is on their Web site and——

Mr. BARTON. If that is a public document, I would ask unanimous consent that we put it in the record so that members of the subcommittee that wish to could take a look at the FERC report.

Is there objection to that? Thank you.

Mr. ESPOSITO. As far as the market structure goes, there is a problem when you set a market up where everybody pays the highest price at the last minute. We and others in the industry have been at FERC advocating that that market be changed for a long time, and you know, if you look at that market, we, I know, in December when gas prices ran up were incurring costs north of \$600 a megawatt-hour. When you add 40 or 50 emissions credits, you could easily get over \$600. So everybody was getting that same \$600 in that market. John Fielder is buying power from Hoover Dam at about 99 cents a megawatt-hour and selling it for the same amount absent some rules to keep him from doing that today.

Mr. BARTON. In your opinion, had the State of California created the power exchange like they did but instead of having a one price market clearing auction system to protect and encourage small producers, what would have happened if they would have had a different auction system similar to the New York Stock Exchange, where it is a ask bid and if you bid it and they say, yes, you sell it at that price instead of waiting to see what the clearing price is for the incremental marginal clearing cost? Would that have worked?

Mr. ESPOSITO. We have been advocating for that for years now, and obviously we advocate it because we believe it will work, and there are academics who will differ. We encourage the bilateral market where, as Mr. Levin was talking about earlier, we each have different needs and different capabilities, and if we can get together and match those needs and capabilities across the table from each other we can resolve the problems and come to prices that are reasonable from both sides.

Mr. BARTON. Mr. Rowe, you said in your testimony that natural gas fired generation is the one that most utilities have decided to build because it is the only easy kind of generation to build. What do you mean by easy to build?

Mr. ROWE. You can build the plants much faster, much cheaper and you have much less difficult times with siting regulation, with not-in-my-backyard opposition, and in general with environmental rules. It is simpler and cheaper to build natural gas.

Mr. BARTON. There is less hassle and at least until recently the supply equation economics of it was a little bit better?

Mr. ROWE. Exactly, sir. For the last 15 years gas has clearly been the economic option of choice for nearly all new generation, and we

are now at a time when we have to question the continued validity of that assumption.

Mr. BARTON. Anybody here who has actually been in a decision-making capacity or at least advisory capacity to building a power plant in California, what is the average time it takes to site a plant? And Mr. Esposito, has your company tried to site a plant and, if so, how long did it take to get a decision on that?

Mr. ESPOSITO. Our choice was to buy an existing plant so we didn't have to go through that process. The averages we hear in the industry is about 3 years.

Mr. BARTON. About 3 years?

Mr. ESPOSITO. About 3 years.

Mr. BARTON. Compare that to the national average if there is one.

Mr. ESPOSITO. If I can compare it to siting a plant in Mr. Rowe's territory, we went from gleam in somebody's eyes to production in 9 months.

Mr. BARTON. In 9 months?

Mr. ESPOSITO. Nine months.

Mr. BARTON. That has got to be the exception to do it that quickly from the gleam in somebody's eye to production.

Mr. ESPOSITO. We saw a price signal in the Midwest. We were willing to spend extra money to get it on the ground so it would be operating next summer. So it is doable with the right set of circumstances. We had a willing utility who wanted to see us in their backyard.

Mr. BARTON. This is my last question. I am going to give Mr. Fielder a first crack at it, but anybody can answer it if you want to.

Given that the State of California is apparently seriously contemplating becoming the power purchaser and power generator of a large portion of its State's baseload, what is the natural competitive advantage that any State government or specifically California's State government has as compared to the private sector?

Mr. FIELDER. Mr. Chairman, that is a loaded question. I think the only—

Mr. BARTON. I intended it to be loaded.

Mr. FIELDER. I think the only competitive advantage from my viewpoint is financing in the fact that they can borrow money at lower rates because it is not taxable. Tax exempt financing is the only advantage.

Mr. BARTON. And they have the taxpayers backing up the full faith and credit of their contract.

Mr. FIELDER. Yes.

Mr. BARTON. But in terms of management's intelligence, futuristic planning, experience, technology, knowledge, does any State government or California State government have a natural competitive advantage to people like you that are greedy capitalists that, you know, probably studied in business school or learned it in the marketplace the hard way?

Mr. FIELDER. In my opinion, no.

Mr. BARTON. Does anybody disagree with that?

Mr. MOORE. I don't disagree but I would refine it that it is not actually a cost savings. The fact is that if the State gets into the

transmission business they can finance—they can use tax exempt debt more easily to finance new transmission.

Mr. BARTON. Their natural advantage is a credit advantage, there is no question.

Mr. MOORE. Right, but that just means it is lost tax revenue to the Federal Government. So as a citizen of the United States it doesn't gain me anything, but ultimately it doesn't affect my net loss.

Mr. BARTON. If we had advocates of State control, and let's assume that they do have a competitive advantage, who regulates the regulator if the State is running the system?

Mr. MOORE. Well, nobody does in that case. I mean, it would even be questionable what role FERC would have, you know, with a State run transmission system like that, and you know, if you look at—going back, you have mentioned data driven a number of times—if you look at costs, again, they have lower debt costs, but traditionally municipal utilities, publicly owned entities enjoy the same advantages, they don't pay taxes, they don't make profits and they have—there are some other smaller subsidies, their rates are slightly, very slightly lower in some cases than private utilities which do pay taxes and which do make profits. That difference in rates is nothing like the lesser amount, the lower debt cost, the lower prices. So the argument I am making is that in a net—on a net basis if transmission goes under State ownership, costs will go up in the long run.

Mr. BARTON. My time has expired. The gentleman from Virginia is recognized for 5 minutes.

Mr. BOUCHER. Thank you very much, Mr. Chairman.

Mr. Levin, as the representative of the Mercantile Exchange I know you have an interest in the reliability and predictability of markets for commodities, and I wonder if you could give us your opinion about whether the market for wholesale power transactions has the level of predictability and reliability that you deem desirable, and if it doesn't why doesn't it? Are there particularly any problems with regard to the predictability of transmission availability? Is that a concern?

Mr. LEVIN. Yeah, I would like to answer that in a couple of different ways. I didn't mention it before, but before California actually embarked on this program NYMEX had two modestly but growing and healthy electricity futures contracts based in the West. We still do. In fact, I understand that the Palos Verdes today had some bids and offers, but it is far and few between. We were trading—these contracts were roughly 800 megawatt-hours each. We were trading 1,000 to 1,500 of these a day. We had somewhere in the order, I think, about 15,000 contracts, open interest. It was actually a vibrant market that existed out West.

When California decided to dramatically tilt everything into its spot market, it changed things—well, it really eliminated the need for that or even the ability to use those sorts of instruments and the purposes of them, and it affected the entire West. It is a little bit more like maybe even a black hole, but I mean these are—Mr. Fielder's company and PG&E were big customers in that forward market beforehand, and when they were eliminated from being in

it, that market disintegrated. In many ways it is still there, but very small, and that had impact.

Now, transmissionwise, which you also talked to, on transmission you need to keep in mind not only the physics but commercially what benefit you can provide, and there are some issues out there right now. In fact, our only criticism of really the PJM system is that we think it has adapted a congestion management program that really makes it more confusing for commercial participants and it is confusing. Unless you ask I won't go into the details of how and why, but what it does is it introduces parties that they don't generally know, can't have full confidence what the cost of transmission will be ahead of time. That is what you need for people to have confidence. They need to be able to perform delivery. It is common sense once again. What will be the cost, is it a reasonable cost, and can I depend on that, and there is too much uncertainty in the pricing.

Mr. BOUCHER. Mr. Levin, is there anything that we ought to be examining at the Federal level, either in Congress or at the FERC, that would provide better predictability with regard to pricing for wholesale power transactions for the transmission component?

Mr. LEVIN. For the transmission component, I think that I would state that the goal should be to be supportive of the commercial efficiency. I mean, I think that actually needs to be there. I think it was in FERC's mandate, because it isn't. And I think then I would add something specific, there is a physical rights model for congestion pricing which we endorse, and other participants experiencing competitive markets have been big endorsers of. I would—and certainly getting firm transmission in place in a program that is usable by market participants, at a bare minimum.

Mr. BOUCHER. Mr. Esposito, you have some comments in your testimony directed to this general subject. Would you care to comment on the extent to which, as a power generator, you have difficulties or perhaps don't have difficulties in getting the transmission that you need in order to deliver your product?

Mr. ESPOSITO. We have a lot of issues with getting transmission and, Congressman, I know we are trying to get you down to our trading floor so you will see some of that in person, I hope soon.

There are issues all over the country. There are California issues. A lot of the problem is that people are measuring their capabilities differently from one area to the next.

For instance, the PJM versus Virginia Power uses different wind speed assumptions which dramatically increase or decrease the amount of capability you might have on a line, and that could be used to commercial advantage. So you have those issues out there.

We have been endorsing the RTO model for FERC, get the transmission out from under those who own generation; make that a business in and of itself that has a desire to serve customers and move more power and to expand when necessary to do so.

Mr. BOUCHER. Do you believe that FERC has current authority to require participation at RTOs, or would FERC's authority have to be augmented before it could do that?

Mr. ESPOSITO. I think that is a real gray issue, Congressman, and I think it could use some clarification or affirmation from you all.

Mr. BOUCHER. Okay. Finally, Mr. Moore, let me commend you for the acknowledgment that you made in your testimony that the Federal clean air standards are not the problem in California; that there is flexibility within the Federal clean air standards to accommodate the California problem and that, therefore, the example of the California problem should not be used as a reason for amending the Federal clean air law. I appreciate very much your candor in making that point.

Mr. Chairman, that is all that I have. I yield back.

Mr. BARTON. We thank the gentleman from Virginia and welcome the gentleman from Oklahoma to question for 7 minutes.

Mr. LARGENT. Thank you, Mr. Chairman.

I wanted to get a reaction from the other members of this panel on Mr. Fielder's suggestion that California be granted some sort of temporary respite and just find out what your reaction is to that.

Mr. ESPOSITO. I will take that on first, if I may, Congressman.

The California market has had 37 amendments in less than 36 months so far trying to fix it and create what are probably little respites along the way. I don't think any of them have been successful. The one that is out there right now that has got the most traction, if you will, is a cost-plus paradigm which smacks, to me, of traditional rate making, which I think has gotten us here in the first place.

What happens after we have this temporary respite, during which you have cut my price and my ability to bring back my capital costs, and all of a sudden the market goes down, all of a sudden, so long, you are on your own, we are going to be back there saying we want stranded costs.

California—we have thrown around a lot of big numbers here. One of the numbers we haven't thrown around is \$16.8 billion in stranded costs collections from the last time we had cost plus rates. So if I haven't made myself clear, I don't think a respite is the answer.

Mr. ROWE. Congressman, with great reluctance and speaking only for my own company and not for EEI, I think something of the respite nature must be done. FERC has found that this wholesale marketplace is broken, and the costs which are streaming into California are so overwhelming that they almost fracture any workable system.

Price caps are, of course, inconsistent with the long-run functioning of a competitive market. You know it. Your colleagues know it. I know it equally well. But it seems to me that we don't have a fully competitive market in California at the moment, and for some short period you probably have to have caps as an element of a solution, but if those are to be adopted, they should be well in excess of the replacement costs of new capacity so that they do not intimidate the construction of new facilities or unfairly penalize people, like my colleagues from Dynegy who placed wagers on this market.

In addition, they have to be accompanied by State mechanisms, such as suggested by SCE, to recover the existing expenditures that have been made, and also by some mechanisms to pass through on a current basis some of the going forward costs of power.

In other words, you can't fix this by just sticking a price cap in. It takes a lot of other pieces at the same time, which are more forward looking, but we have price caps at a very high level, \$1,000 a megawatt hour in the PJM pool, and that has not deterred new construction there.

Mr. LARGENT. Okay. Mr. Levin.

Mr. LEVIN. There are two elements of a respite that—and I will speak for me here, not necessarily—the New York Mercantile Exchange has no formal view as somebody who works in all of these energy markets. For me, I have problems with two aspects. One is there is potentially more than just an element of coercion there, and that doesn't seem to be the solution for their problems to now mandate behavior against the will of others in the marketplace. That is very troubling, and a respite is too open-ended.

But the other aspect is, what is California doing to solve this problem? I mean, even if a respite comes into play, as Mr. Rowe suggested at the end of what he just said that, well, it needs to be in combination with other things, what are they doing? And it is not clear they are doing anything right now that is constructive, and that needs to be the first step. They need to start doing some constructive things and they need to start going to the entities that they are seeking this respite really from people like Mr. Esposito's company. If they had a track record of having done that, material things to get this problem solved, not threatening to take over the grid or even to be—buying and selling—and, by the way, Mr. Chairman, I think it is a lot worse, the State doing it. I am sorry I am throwing that in, but it is worse, far worse.

This is what we have done so far. They have not addressed in any meaningful way how to solve this, and to the best of our knowledge, they have not really tried to go to the sellers and say, let us sit down, let us solve this problem. At that point, I am not sure how I would feel, but we are not there and those are necessary first steps.

Mr. LARGENT. Mr. Moore.

Mr. MOORE. Well, I would say that the kind of respite that is suggested is essentially equivalent to imposing blackouts. If you impose any kind of wholesale price controls, cost based or otherwise, you are going to reduce the supply in the market at a time when supply is already below demand, when there is nothing being put in place to constrain demand, and that means absolutely unequivocally more blackouts.

So that is the first big and biggest problem.

They haven't worked in the past. There have been several attempts to do different kinds of tweaks. The ISO, the independent system operator in California, tried to do wholesale price caps. They didn't work. They had to lift them because they reduced supply.

And for 6 months, as this crisis was developing, up until the beginning of this year, the California State government leaders clove to the policy of trying to get the Federal Government to cap wholesale prices in some way and took no other action whatsoever during that time, because that was the peg they hung their hat on. It is my belief that if we were to come in at the Federal level and impose some kind of temporary controls like that, the pressure on the

California legislature to do anything would immediately come off and they wouldn't do anything because they don't like any of the solutions they are facing, and we would be back to the same problem again this summer or the next fall, what have you.

So in no way, shape or form is that a solution.

But if you are going to throw that out, you do have to bring up alternative ways to address the utilities' financial problems, which are the fundamental reason for doing that in the first place.

Mr. LARGENT. My time has expired. If I could ask a yes/no question from four of the panelists, from Mr. Rowe to my right, your left.

Mr. Esposito said something about granting FERC power of eminent domain. Good idea, bad idea?

Mr. ROWE. Good idea, but won't solve the problem.

Mr. LEVIN. I am going to pass on this one.

Mr. MOORE. Bad idea.

Mr. FIELDER. Bad idea.

Mr. LARGENT. Thank you, Mr. Chairman.

Mr. BARTON. Okay. Thank you, Congressman.

Mr. Strickland is recognized for 7 minutes. Let me say something on price caps, since there has been quite a bit said. The Chair has no intention of marking up either a stand-alone bill or a bill with price caps in it. Now, I just want that on the record. If we have folks that are hanging their hats that this subcommittee is going to pass a price cap relief bill, that is the wrong peg to hang it on because that is not going to happen.

Mr. Strickland.

Mr. STRICKLAND. Thank you, Mr. Chairman.

Mr. Esposito, my understanding is that Dynergy is constructing a facility in my district in Southern Ohio, and I just would like to say to you that I hope you find that a wonderful place to do business.

Mr. ESPOSITO. Thank you.

Mr. STRICKLAND. As I said in my opening statement, I am concerned about the ability of this country to maintain a reliable and economic supply of nuclear fuel, and to that end, Mr. Rowe, I would like to address a few questions to you, if I could. How many nuclear reactors does your company operate at this time?

Mr. ROWE. We operate 17.

Mr. STRICKLAND. Is that a majority of your company's source of generation?

Mr. ROWE. Indeed, it is. It is more than half of our capacity and substantially more than that in terms of energy production.

Mr. STRICKLAND. Okay. I am going to ask you a question that may have a self-evident answer, but is having a long-term stable source of domestic uranium enrichment services important to ensuring that your nuclear power generating business will remain viable into the future?

Mr. ROWE. It is very important, sir.

Mr. STRICKLAND. Okay. As I am sure you know, over half of the fuel sold by the United States Enrichment Corporation is imported from blended-down nuclear warheads from Russia. Under this important nonproliferation agreement, USEC is now making an effort

to import and broker commercially produced uranium enrichment services from Russia as well.

I could be, you know, off a little bit when I say half or roughly half or slightly more than half, but a huge portion.

Mr. Rowe, in your opinion, as the CEO of Exelon, is the trend toward USEC's reliance upon Russia for the majority of U.S. supplies of enrichment services good for our nuclear power industry?

Mr. ROWE. It is my opinion that having diverse sources, including some that are domestic, is what our industry needs. I think the ability to import from abroad is important, but like you, I would question the wisdom of having that be the only source.

Mr. STRICKLAND. Are you or, to your knowledge, do others of your colleagues in the various corporations that you are aware of, which rely upon nuclear fuel, is there a concern that we may not be paying adequate attention to the stability, reliability of an economical domestic supply of nuclear fuel in this country?

Mr. ROWE. Yes, sir.

Mr. STRICKLAND. Would you say that again?

Mr. ROWE. Yes, sir.

Mr. STRICKLAND. I just—

Mr. ROWE. I can say it very loudly and explain, but I think your question says it exactly right, sir.

Mr. STRICKLAND. The reason I wanted you to say it twice is that I reiterate what I have said before, Mr. Chairman. Over 20 percent of all of the electricity generated in the United States of America comes from nuclear power plants, and we have an industry that needs our attention.

Mr. Rowe, thank you. I thank all of you. You have been very patient with all of us today. All of us, I think, appreciate the fact that you have been patient with us and you have given us good information.

Thank you, Mr. Chairman.

Mr. BARTON. Thank you, Congressman.

The gentleman from Illinois, Mr. Shimkus, is recognized for 7 minutes.

Mr. SHIMKUS. Thank you, Mr. Chairman. The more we listen, I think, the more questions we continue to scribble down and I have got notes all over the place. So I am going to try to keep this organized in my mind somewhat.

First, Mr. Moore, I have to ask you a question. Do you have any expertise on the Clean Air Act?

Mr. MOORE. Some. I have—I actually have staff that are experts. I have staff who are on advisory panels with international bodies.

Mr. SHIMKUS. Why I asked that, I have your bio. You have a Masters in history and a Masters in economics.

Mr. MOORE. And a Ph.D. in economics.

Mr. SHIMKUS. And a Ph.D. economics. I wanted to see what the scientific background is that you might have to make a claim on the impact of the Clean Air Act on power generation today.

Mr. MOORE. I don't have any expertise to comment on the scientific aspects. However, the impacts I commented on were the market impacts, the economic impacts, which fall under my expertise.

Mr. SHIMKUS. Okay. But you have no expertise on the scientific aspects?

Mr. MOORE. No, I do not.

Mr. SHIMKUS. Okay. Thank you very much.

Mr. BARTON. The Chair would point out that it is not a requirement that people have to back their opinions up with an educational or even an experimental background.

Mr. SHIMKUS. I would say we are a perfect example of that.

Mr. BARTON. Exactly.

Mr. SHIMKUS. Why I have to get that on the record is, historically with the advent of the Clean Air Act, our utility-generating industry has changed and it has been kind of a ripple effect.

I went back for—you all had to stay here. I went back after my first round of questioning to get some lunch and check some e-mail. On my e-mail, I have got an article from the Breeze Courier, it is a paper in Taylorville, Illinois, and the headline is High Gas Prices an Issue in Edinburg, a small community. Edinburg: With the gas expenses exceeding the income by about \$44,600, the Edinburg Village board decided to borrow \$20,000 from the general account to pay for the gas bill.

Now, this is happening all over the midwest. The reason is, is because of the Clean Air Act and the siting—the ease of siting of natural gas generation has created a higher demand for that fuel because we are not using other fuels even for base loading to some extent, and that supply and demand equation is filtering down again now in the—and I think utilities are going to be questioning their market assumptions based upon the current high cost of natural gas with siting new natural gas generating facilities; and that is the way the market works.

To say that the Clean Air Act has had no impact for those of us who are from southern Illinois, who have seen coal mines close yearly because of the impact of the Clean Air Act, obviously we can't leave that unchallenged.

Can I ask a question for those who are in production of new generating facilities, there are two type—on the natural gas generating facilities we throw out the term peaker plants, which is supposed to be prepared for exceeding the baseload, and you fire them up and then you turn them off.

Is that true anymore, or are these peaker plants running daily?

Mr. ROWE. Congressman Shimkus, if I can at least try, it is our experience that they are running more often than would originally have been anticipated, but they are still running a fairly small percentage of the hours of the year, and I would be happy to get you some real data on that if I can.

There are, in fact, two kinds, the gas-combined cycle plant, which is the cleanest and most efficient and is designed to run a great many hours of the year, and the peaking single-cycle turbine, which is what you and I have seen built in Illinois.

On an economic basis, it is the peaking capacity that is most needed in Illinois at the present time. While I am keenly sensitive to the point you just made about rising natural gas prices, here I would say that the peaks we have seen in Illinois in the last year, unpleasant though they are for my company as well as others, are

almost a necessary antidote to the fact that the prices were too low for many years to encourage new drilling in pipelines.

So I went out on a limb once today, but I am generally not a very big fan of price caps and wouldn't like to see us get trigger happy with them.

Mr. SHIMKUS. Let me follow up. Mr. Esposito, you used the terminology that there were market signals demonstrated that caused you to reinvest in generating facilities in Illinois. I understand what that means but, for the record, what do you mean?

Mr. ESPOSITO. Well, we were seeing prices well north of a \$1,000 a megawatt in—I think it was the summer of 1998. We came in—to answer your previous question, we came in, laid a plant down, ran it hard in 1999; it only ran 200 hours in 2000. So these plants can run hard, they can run not much.

Our plants in California are running now in the—most of the units should be down for maintenance and they have been running now since October in that sort of situation. So it really varies on the location.

Mr. SHIMKUS. Let me—I have limited time. So if we have caps, how are there any market signals? Are there any market signals if you cap?

Mr. ESPOSITO. Well, I mean, if you cap high enough, there could still be market signals below that cap, I suppose.

Mr. SHIMKUS. Is it in the interest of California utilities to have a cap in place to help them get out of their financial mess but not too high to inspire reinvestment in the California market?

Mr. ESPOSITO. Internally, we have talked about does it make sense to have the \$1,000 cap that we have in the east in the west? It hasn't been a disaster in the east yet. It may be. But then we look at some of our costs of production and we are looking at that maybe going to \$1,000 in some cases with gas and emissions prices.

Mr. SHIMKUS. Mr. Chairman, since I talked to Mr. Fielder, can I, since I referred to that?

Mr. BARTON. Sure.

Mr. SHIMKUS. But before you answer that question, how can you not—explain why you are not supportive of FERC having eminent domain to site transmission powers when California is experiencing such a disaster? I mean, I would think that is an easy thing to say, we need to go and import more power.

Mr. FIELDER. Because in California the existing transmission owners already have the power of eminent domain so if a transmission line is needed—

Mr. SHIMKUS. But you don't have it in the State of Nevada.

Mr. FIELDER. We don't have it in the State of Nevada.

Mr. SHIMKUS. That is the whole point of that debate. How can we get across State lines? Yes, you can do it with—if you have limited generation ability right now, you siting more transmission lines may not, I don't see how—

Mr. BARTON. I do not think the problem is an interstate transmission line problem. I think the problem is an intrastate transmission line. Am I right or wrong on that?

Mr. FIELDER. In California, Mr. Chairman, we have a lot of intrastate problems.

Mr. BARTON. Intrastate?

Mr. FIELDER. Intrastate.

Mr. BARTON. Within the State?

Mr. FIELDER. Within the State.

Mr. BARTON. It is not necessarily getting it across the State boundaries.

Mr. SHIMKUS. But it could be?

Mr. BARTON. Well, it could be, but in point of fact, it isn't. They haven't gotten out of the State yet in California. We will worry about interstate once we have solved the intrastate problem.

Mr. SHIMKUS. But we are concerned about interstate.

Mr. BARTON. True. That is our Federal responsibility. You are absolutely right.

Mr. SHIMKUS. I will stop while I am ahead and yield back the balance of my time.

Mr. MOORE. Mr. Chairman, may I respond to Congressman Shimkus?

Mr. BARTON. Very quickly.

Mr. MOORE. I think my comments were maybe misunderstood. What I am arguing is that we can solve the shortage crisis for electricity within California without changing the national air quality standard. Right now, the projections are with plants being built by 2003 we will have more electricity supply than demand underneath—under the current air quality standards. I agree that it has tremendous price effects, and I wasn't commenting on the price effects. Air quality standards drive up the price of electricity hands down, and that is an issue that there are many ways in which it needs to be addressed, but in order to satisfy California's shortage, we don't necessarily need to change the air quality standards. That was my only argument.

Mr. SHIMKUS. Now you are speaking as an economist, not a scientist, and I appreciate that.

Mr. BARTON. Before I recognize Mr. Waxman, Mr. Esposito, is it not true that last year within the California power pool there was a limited timeframe in which they put wholesale price caps in effect?

Mr. ESPOSITO. There were wholesale price caps on and off now for probably 3 years in the California market, at varying levels and with varying different triggers.

Mr. BARTON. Is there any evidence that those price caps had anything other than a short-term effect in minimizing costs?

Mr. ESPOSITO. There is some line of reasoning, in fact, that they increased the costs.

Mr. BARTON. That they increased costs?

Mr. ESPOSITO. Yes, sir.

Mr. BARTON. Within that very specific market, when price caps were tried at the State level, they did not work, is that a fair statement?

Mr. ESPOSITO. That is a fair statement.

Mr. BARTON. Mr. Waxman, for 7 minutes.

Mr. WAXMAN. Thank you very much, Mr. Chairman.

First of all, I want to apologize to all of you. We have got so many things going on at the same time that I wasn't here to listen to your testimony, but I have had a chance to review some of it, and I will look at the record more carefully.

Mr. Esposito, in your testimony, you state that California's clean air rules are going to require a 60 percent reduction in emissions from your plants in San Diego. You imply that this will require you to take 750 megawatts off line. We had hoped to have environmental regulators from California here today so that we could better understand these kinds of claims. Unfortunately, they did not receive sufficient notice to be able to attend.

The Air Resources Board has stated that, quote, no essential electricity generation has been curtailed due to air emissions limitations. Additionally, the South Coast Air Quality Management District has issued several executive orders in order to ensure that generators can continue to operate in times of need, and I would like to enter three rule 118 executive orders into the record so that the record will reflect the accommodations made by the South Coast Air Quality Management District.

Mr. BARTON. We would ask that the staffs be given a chance to look at it, but I have no objection once we have looked at the documents.

Mr. WAXMAN. The Air Quality District has also announced that they will finalize changes to the NO_x trading program in April or May of this year to help stabilize credit prices and reduce the cost of compliance. Reliant Energy is one of your competitors, and they have been quoted in the press as saying that the implication that environmental regulations have limited electricity generation is absolutely false. We are making every megawatt available on request. We factored the air quality regulations into our daily operating basis and they are not causing us to withhold power. That is the end of their quote.

So given these facts, I want your claims to be clear on the record so that we can follow up with State regulators. I would also like to send you additional questions so that we can better understand your claims later. But for now, have clean air rules caused you to shut down your power plants or significantly limit your generation in California?

Mr. ESPOSITO. Congressman, we have got generation both in the South Coast District and in San Diego. In San Diego, which is what I referred to in my testimony, we have suffered a reduction in emissions from 1,100 tons to 419 in terms of allowances between 2000 and 2001. So far this year, we have used up in January alone 106 tons of that.

Now, we have a request for relief into the San Diego Board. We are hopeful that we will get it, but in the meantime we would, as wise stewards of our assets, so to speak, we would have shut the plants down a week ago, except we got a court order telling us to keep them open.

So while this stuff may not actually be happening—now, I am aware that AES shut down perhaps November and December. I don't know the exact dates. That was a 2,400 megawatt plant that was shut down last year because of lack of emissions allowances.

Mr. WAXMAN. Is that one of your plants?

Mr. ESPOSITO. No, it wasn't.

Mr. WAXMAN. But as far as your plants, power plants, are concerned, you haven't had to shut anything down or significantly limit your generation, except in San Diego?

Mr. ESPOSITO. What I am getting at, Congressman, is that we have got a level of uncertainty here that is growing. If we go at our present pace in San Diego and do not get relief, and it is not certain that we are going to get relief, we are done in May. We are looking at a summer that is going to be real tough.

Mr. WAXMAN. Are you currently being told by State officials that clean air rules will limit your generation of electricity in the future during times of need?

Mr. ESPOSITO. The message we are getting, sort of sub rosa, Congressman, is go ahead and run and we will worry about what it costs later. That is not the way we want to do business. We are not about to break the law because somebody says, shh, go do it.

So we are just in a tough position and we are looking for some relief.

I am not here advocating that we have to change the Clean Air Act. I am just trying to alert you all to a situation that needs some attention.

Mr. WAXMAN. Would it be possible to achieve the 60 percent reduction in emissions you mentioned through the installation of pollution control devices?

Mr. ESPOSITO. In fact, we have installed some pollution control devices on that facility, but you can't take them down to do it. It is a 6- to 9-month process. These are all very old units. The parts just don't come off a shelf. You have to go and order them and get them and get the time to shut the plant down to do it. We have \$20 million that I am aware of that is budgeted for cleaning up our plants but, again, if the ISO says run, we are running.

Mr. WAXMAN. Today I was told that your company agreed to additional reductions in emissions voluntarily in order to receive a variance for additional time to put pollution controls on. Is that true?

Mr. ESPOSITO. I am not aware of that one way or the other, Congressman.

Mr. WAXMAN. Okay. Well, I think it is helpful to get these statements on the record. We will evaluate it. We want to understand the situation.

Mr. ESPOSITO. I would be glad to follow-up. We are looking to solve the problem.

Mr. BARTON. We are also going to do a specific hearing just on California which we can go into some of these.

Mr. WAXMAN. That would be helpful, Mr. Chairman. We should go into these issues and we should sort through a lot of the claims that are made to find out what is accurate and what is not, what can be addressed in what way. Some things can be addressed administratively. Some things can be addressed by California. Some may require our action. I still maintain that a lot of what we need is an active involvement by the Federal Energy Regulatory Commission, because they have, I think, a clear responsibility, as I see it, to deal with this problem. But I appreciate your answer to these questions.

Mr. Chairman, I yield back the balance of my time.

Mr. BARTON. I thank the gentleman from California, and we look forward to his continued presence. I think it is going to be very important, Congressman Waxman, that you be involved on this sub-

committee this year because these are issues you know a lot about, and it is also in your State that some of the problems we are facing immediately.

Mr. WAXMAN. I look forward to working with you, Mr. Chairman.

Mr. BARTON. Glad to have that.

Last but not least, the gentleman from Nebraska, Mr. Terry, for the last 7 minutes of questioning.

Mr. TERRY. I feel the anticipation in the room.

Mr. Esposito, let me ask you very quickly just kind of a friendly wrap-up question in regard to the issue that you were just having a colloquy on.

My understanding is that in order to ease the pain right now that California, in regard to environmental regulations and requirements, whether it is a reclaim program or a flexibility on backup generators that, you know, these are all in flux right now. Do you know what you face in terms of these types of environmental regulations and requirements this summer?

I mean, how can you plan? What do you expect?

Mr. ESPOSITO. Well, planning obviously is extremely difficult. Congressman Waxman a moment ago was talking about the South Coast Air Quality Management District proposal, and as I understand that proposal it basically says we can't go out in the market and buy credits anymore as of January 11. So we stopped doing that because we can't do it, and if we get them and we can't use them then we have paid for something we can't use. And there is a process that is going to take months in that district to figure out whether that is actually going to be adopted.

My understanding, and perhaps Mr. Waxman knows better than I do, is then it has to go to the EPA because it is part of a State implementation plan. So you have got all this uncertainty revolving around just that marketplace to get the credits to be able to know you are going to run.

You know, we are trying to enter into forward contracts with the State of California and with other parties, and if you don't know the costs of running it, it is very difficult to negotiate those contracts. Environmental is just one of a plethora of regulatory uncertainty problems that I think are plaguing the industry in California and across the Nation right now.

Mr. TERRY. One of the things that you need is certainty. Do you have any feelings that—or a clear understanding that there will be certainty in that area of environmental regulations this summer?

Mr. ESPOSITO. The last thing you are going to do is get a lawyer to say, yes, I have a clear understanding.

Mr. TERRY. Good point. Thank you.

One wrap-up question for Mr. Fielder, and Mr. Levin. You had brought up the point of the call option and that triggered a thought in my mind. We have talked about how you were dumped into the spot market, weren't able to do long-term contracting. Were there other hedging opportunities or options out there that were available to you? None?

Mr. FIELDER. Well, Mr. Terry, let me answer it this way: The products that were available in the PX forward market were all firm energy. We have been trying to get bilateral authority to do the kind of products that Mr. Levin talked about, capacity prod-

ucts, call options, because you can't run an electric system with load variability with all firm products.

In California, there hasn't been any kind of standard capacity products available for us to do.

Mr. TERRY. So there is just absolutely no hedging options available to you? I can't imagine.

Mr. FIELDER. Whatever options were available we took advantage of.

Mr. TERRY. What was available to you?

Mr. FIELDER. In the block forward market of the power exchange, we could buy out about through the end of 2001. We could buy 6 by 16, meaning 6 days a week, 16 hours a day, firm power, to help shape the load.

Mr. TERRY. Okay.

Mr. FIELDER. We did buy that up to the limits that the public utilities committee had placed on us. So we did buy through the summer, and they were worth about almost a billion dollars. So that is about it.

Mr. TERRY. I have to imagine it is still a small percentage.

Mr. FIELDER. A small percentage.

Mr. TERRY. All right. Thank you, Mr. Levin.

Mr. LEVIN. Yes. I want to just add something. Last summer, at the beginning of the summer, I believe the CPUC voted, I don't know if it was unanimous, to allow the utilities, the jurisdiction of the utilities there, to participate in other, and it is called qualified exchanges. That was in the legislation. I don't know if it was ever really identified or defined what those were. And that got over to the legislature. We don't exactly know why, but in the consideration of that, they made a determination to study that for a year.

So they put that off for a year before anybody would have been allowed to do it, and we know what ensued. In fact, it might have even been the spring when this happened. It was remarkable timing. This is really like rearranging the deck chairs on the Titanic and it prevented them from going out to anybody else.

The last thing is, John, I do have to tell you that a couple of years ago when you guys did seek that approval, I haven't agreed with everything you said today but when you said everybody was in agreement with this or that, but you said nobody supported you. Actually we did try to support you. We even called your lawyers. I think because of our record of always being against the State there that they said why don't you keep a low profile, but we did support it.

Mr. FIELDER. I will stand corrected.

Mr. TERRY. Mr. Levin, let me leave you with the last word. Has the California crisis in any way affected the overall markets, Wall Street?

Mr. LEVIN. Well, it has affected it, yes.

Mr. TERRY. In your opinion?

Mr. LEVIN. I mean, no, we have talked to some of the bankers. The bankers are very concerned about what is going on there. They are wondering about what kind of interference we are going to see with other utilities. There could be some reverberation there.

I would also say that it is—which is a very serious impact, and currently obviously that is operational in California. You have

also—people say, and Peter said, well, the natural gas price rose and it helped raise electricity prices. We should not lose sight of the fact, going back to this structure in California, forcing everything into spot, the next day price in natural gas has reportedly reached as high as \$60 per million BTU in California, what they call a California border. That means inside California. This is for gas that is costing maybe \$10 or so on the other side of that pipeline. Certainly nowhere near \$60. It was \$40 a couple of days ago is what somebody in the industry told me.

This is the direct result of the panic buying, because they are all now in this spot market. This isn't high gas prices leading electricity now. This is actually a panicked electricity marketing—and it is next day natural gas, and I want to differ between that and say the NYMEX where the price has been around, you know, Gulf Coast Louisiana, \$6 per million BTU. So \$40 next day inside the border of California in response.

So it has had—its impact is spreading. This is very unfortunate and this is why, once again, commercial efficiency it really matters.

Mr. TERRY. Thank you, Mr. Chairman. I yield back, if there is any time.

Mr. BARTON. I think you used 2 seconds too long. That is not a bad record.

Mr. TERRY. That is still quick for today.

Mr. BARTON. The Chair wants to accept the unanimous consent request of the gentleman from California on the South Coast Air Quality Management District documents, and the Chair would ask unanimous consent that an editorial to The New York Times dated February 7, 2001, by Richard Wheatley, who is the director of corporate communications for Reliant Energy, also be allowed in the record at this point in time.

Is there objection? Hearing none, so ordered.

[The information referred to appears at pg. 146.]

Mr. BARTON. We want to thank this panel for your attendance today. I think we are learning. I have learned as chairman that one size doesn't fit all in the restructuring debate and the restructuring markets. We saw two States, three States today, where restructuring appears to be meeting the goal of lower prices and more competition.

We have seen one State where, with the best of intentions, that goal has not been met.

We will do a specific hearing on California. We will also probably do another hearing on or two or three or four on restructuring in general in the electricity markets, but it is obvious that decisions that could have been made several years ago that weren't made to address some of these problems are now coming home to roost.

We thank you for your attendance. There will be additional written questions from both sides of the aisle for the record, and we would hope that you would respond expeditiously. This hearing is adjourned.

[Whereupon, at 3:35 p.m., the subcommittee was adjourned.]

[Additional material submitted for the record follows:

PREPARED STATEMENT OF ELECTRIC POWER SUPPLY ASSOCIATION

CALIFORNIA: THE REAL STORY

A SITUATION ANALYSIS BY THE ELECTRIC POWER SUPPLY ASSOCIATION

In recent months, much has been said about what happened to electricity prices in California this year and why. We urge customers, market participants, regulators, legislators, analysts and commentators to look at all of the facts before rushing to conclusions or judgments about what happened. No one is well served by a rush to judgment or by perpetuating the unfounded allegations that have been swirling in California. In truth, what transpired was what was predicted by many in the market prior to the summer of 2000.

The solution lies in completing the transition to real competition as soon as possible. Implementing temporary "fixes" that continue to create uncertainty and distortions into the future only prolong the state's power-supply dilemma. To this end, the Electric Power Supply Association (EPSA) offers the following:

1. Supply and Demand

As in any commodity market, prices go up when demand outstrips supply. California is facing rising electricity demand accompanied by a severe shortage of generating capacity and supply availability:

- From 1996 to 1999, peak demand increased by 2,690 megawatts, while only 529 megawatts of net capacity was added.¹
- Electricity demand in California has increased dramatically—approximately 2% each year since 1990, or an average increase in demand of 1,000 megawatts a year.²
- California accounts for less than half of the demand in the Western Systems Coordinating Council (WSCC), which is also seeing significant load growth.³
- Hydropower generation in June 2000 was approximately 6,000 megawatts less than June 1999.⁴
- Unusually hot weather blanketed much of the West this summer, with high temperatures seen simultaneously from Seattle to Phoenix on some days, particularly when compared with last summer, which was cooler than usual.⁵
- Also during the summer, fires in the West knocked out some transmission lines, further limiting the movement of power and exacerbating the transmission constraints generally in California. Constraints on Path 15 continue to limit power transfers between northern and southern California.

Generators also faced new and different operational challenges this year.

- By summer 2000, natural gas prices roughly doubled from 1999, adding \$25-\$35 per megawatt hour to the cost of gas-fired generation.⁶ By November, prices had increased approximately 260% from November 1999.⁷
- The cost of emission credits has risen from \$2.50 to \$4 per pound in 1999 to \$40-\$50 per pound this summer in the Los Angeles basin, and fewer credits are available at any price. The combined cost of fuel and nitrogen oxide (NO_x) credits for a natural gas-fueled peaking unit in the Los Angeles Basin is now approximately \$147 per megawatt hour.⁸
- Sixty-one percent of the California generating fleet is more than 30 years old, leading to a greater risk of forced outages and require more maintenance than newer plants. In addition, these older facilities have the potential for lower availability factors.⁹

¹ California Energy Commission (CEC)

² *California Energy Demand, 2000-2010*, CEC

³ 2000 WSCC Information Summary

⁴ *Study of Western Power Market Prices, Summer 2000*, Northwest Power Planning Council, October 11, 2000, page 3

⁵ National Oceanographic and Atmospheric Administration

⁶ *Natural Gas Intelligence*

⁷ California ISO Market Analysis Report, December 20, 2000

⁸ *Power Markets Week*, August 21, 2000; *Daily Environment Report*, January 16, 2001. Recently, gas prices in California have reached \$7.00/MMBtu. With a heat rate of 11,000 Btus per kilowatt hour, fuel costs per megawatt hour are \$77. (At more typical fuel prices of \$4 to \$5 per MMBtu, the fuel price for gas generation is \$44 to \$55 per megawatt hour.) At \$50 per pound for NO_x emission credits, the average gas plant, which emits 1.4 pounds of NO_x per megawatt hour, spends \$70 for NO_x credits to generate one megawatt hour.

⁹ 1999 & 2000 WSCC Information Summaries

2. New Investment: Getting It Done

As of January 2001, more than 18,000 megawatts of new capacity have been announced in California.¹⁰ Since the state's restructuring in 1998, the California Energy Commission has approved nine major power plant projects with a combined generation capacity of 6,278 MW. Of these, five power plants with a combined generation capacity of 3,988 MW are now under construction, with 2,368 MW expected to be online during 2001. In addition, another 14 electricity generating projects, totaling 7,736 MW, are currently being considered for licensing by the Commission.¹¹

Clearly, though, price caps and regulatory impediments to siting will stifle additional investment. While some generation can successfully be built and operated under the caps, much-needed peaking units face a tougher situation. Units that operate only a few hours a year have to recover all of their fixed and operating costs over those limited hours of operation. From April 1999 to March 2000, generators supplying the last 10 percent of the California ISO's (Cal ISO) peak demand ran less than 33 hours. To recover just fixed and variable costs, with no earnings, the price would need to be more than \$1,450 per megawatt hour.¹² Of course, these generation owners assume the risk that these peaking units will run during these 33 hours, which may not be the case if sufficient new generation is built.

Price caps have other disruptive impacts in the market. In addition to dampening price signals for much needed investments, price caps also discourage demand-side response to higher prices, eliminating incentives customers might have to reduce load or switch suppliers to find a better deal. Price caps also introduce a measure of regulatory and political risk. Caps in California have plummeted from \$750 to \$500 to \$250 per megawatt hour, with calls for \$100 per megawatt hour. Currently, a \$150 "soft cap" is in place, requiring additional justification for prices above this "break point." This approach sends signals to national energy infrastructure companies, and the lenders who finance their power plant projects, that investing outside California makes better business sense in terms of capital deployment, risk management and return on investment.

Price caps reflect another problem: they are completely arbitrary and do not reflect either the sellers' cost or customers' value of electric power.¹³ Californians have been given an unrealistic expectation of what constitutes reasonable power prices during periods of scarcity. Indeed, under the old regulatory paradigm, utility prices were averaged, making actual costs less conspicuous.

The price of retail power for residential and small commercial customers has been capped for several years at a rate that reflected a 10 percent discount. Thus, customers are expecting prices more compatible with pre-1996 prices. As noted above, natural gas prices and the cost of emissions credits, as well as the cost of basic power generation equipment, have risen significantly during that period. To base price expectations on past circumstances misrepresents reality. To whatever extent policy-makers insist on price caps, they should reflect tangible, reality-based metrics, not outdated assumptions.

In addition to price caps, the regulatory environment in California makes building power plants an extremely difficult undertaking. The power plant siting procedures, organized by the California Energy Commission (CEC) as a "one-stop" process, actually involves 30 or so government agencies. The absence of time limits and an open-ended scope of investigation has precluded timely—let alone accelerated—siting decisions. While recent changes may improve these procedures, the siting process has unquestionably contributed to the shortfall of generation in California.

Power plant development companies operate nationally, assessing development opportunities in numerous locations throughout the United States (and often internationally) simultaneously. In other states, some companies have successfully taken generation projects from *conception to commercial operation* in less than 12 months. In California, the multi-year siting process, community opposition, risk of litigation and regulatory price interventions (i.e., retroactive reductions of competitively determined prices) combine to suggest that prudent companies will take their turbine-generator equipment and invest elsewhere. Where companies choose to face the hurdles associated with developing California projects, the nationwide competition for capital and financing often drives investment to other markets or adds a risk premium for California development.

¹⁰ EPSCA Merchant Plant Matrix, January 2001.

¹¹ Update on Energy Commission's Review of California Power Projects, CEC, January 12, 2001.

¹² Cal ISO Market Operations Report, Actual Loads from April 1999-March 2000.

¹³ The average bid from customers in the demand program of the Cal ISO was \$38,000 per megawatt month, which translates to approximately \$1,200 per megawatt hour assuming the Cal ISO calls the maximum number of curtailment hours set forth in the program.

3. Market Structure Matters: The Wholesale Story

There are two fundamental problems with the wholesale market in California: a structure that puts undue pressure on the more volatile short-term markets and the imposition of price restrictions on purchases of wholesale energy and ancillary services.

The California wholesale market was designed to give an incentive to load participants to move much of their buying and selling activity into the day-ahead, day-of and real-time markets, particularly in the California Power Exchange (CalPX). In any commodity market, it is natural that shorter-term markets will be the most volatile. Contrary to popular belief, generators and marketers are not inveterate gamblers seeking creative strategies to game markets and drive up prices.¹⁴

Rather, these companies have invested millions of dollars in California assets and prefer a strategy that permits most, if not all, of their risks to be hedged in forward markets. Thus, many generators sold power ahead of the summer. Data from the CalPX shows that from February to May 2000, forward contracts for June, July and August were available for \$55 to \$65 a megawatt hour. By August, 2000, forward prices for September were closer to \$150, though these prices fell below \$100 by the end of August. In that same month, forward prices for the first quarter of 2001 were \$47. Daily prices in January averaged between \$125 and \$171.¹⁵

California's rules, however, initially limited the ability of utilities to access the hedging tools normally available to load-serving entities. Utilities were permitted to buy only a limited portion of their load in the CalPX's block forwards market, which mitigates some risk, but until recently were not permitted to engage in forward bilateral contracts, options or other risk-mitigation tools in use in the wholesale market. With strict limitations on their use of forward markets and other risk management tools, the utilities were forced to purchase significant portions of their supply in the spot market.¹⁶

Additionally, price caps have also created a problem in the Cal ISO's real-time balancing market, driving the load serving entities in California to under-schedule their power needs in the day-ahead markets as a means of achieving a lower overall energy rate. The balancing market price caps provide a free hedging product, allowing utilities to transfer purchases to the real-time market when the price in the day-ahead market exceeds the cap set by the Cal ISO. The Cal ISO has determined that underscheduling has significant operational and reliability impacts; in some hours, the Cal ISO has met as much as 25 percent of the system needs in the real-time market.¹⁷ During summer 2000, the Cal ISO went out of market to purchase 159,098 megawatt hours, compared to 3,158 megawatt hours in 1999.¹⁸

Price caps have also discouraged demand-side responses and load-reduction programs. And, with or without price caps, load reduction programs will face a greater challenge in 2001, when the supply and demand balance will be even tighter than it was in 2000.

4. Market Structure Matters: The Retail Story

Wholesale and retail markets are two sides of the same coin. A healthy wholesale market is a critical component of a well-functioning retail market. If wholesale markets don't work, retail suppliers can't provide customers with products that meet their needs. On the other hand, poorly functioning retail markets disconnect load from price signals and deprive customers of the protection against wholesale price volatility afforded by risk-management products.

While California got a great deal of attention a few years ago for being the first state to open its retail markets, in fact, restructuring in California has been largely at the wholesale level. While customer switching isn't the only measure of success,

¹⁴ Between 1997 and 1998, a number of competitive power suppliers purchased the gas- and oil-fired generation assets of Pacific Gas & Electric, Southern California Edison (SCE) and San Diego Gas & Electric (SDG&E). The three utilities retained over 50% of the generating capacity in the state, and no new California generator owns more than 9% of the generating assets.

¹⁵ CalPX Block Forwards Market Daily Trading Statistics, Power Markets Week. Of course, the closer to delivery day the more forward prices reflect the short-term markets.

¹⁶ In addition, the California Public Utilities Commission (CPUC) rules made forward market hedges subject to reasonableness reviews by state regulators, while spot market purchases were deemed *per se* reasonable. Accordingly, SCE, for example, hedged about 1,750 megawatts of its 2,200-megawatt limit in June and 3,000-3,500 of its 5,200-megawatt limit for July-September. SDG&E bought none of its power in the forward market, relying solely on the day ahead and day of markets. See Cal ISO, *Report on California Energy Market Issues and Performance: May-June 2000*, Special Report issued August 10, 2000.

¹⁷ California ISO ADR Committee, *Extension of Price Cap Authority & Level of Price Caps After October 15, 2000*.

¹⁸ California ISO, *Reliability Concerns in Underscheduling of Load*, Memo to Board of Governors, August 25, 2000.

only about 2 percent of California's customers (and only about 12.5 percent of total load)¹⁹ have switched suppliers—almost exclusively to subsidized green products. When it adopted its restructuring plan, California's decision to freeze rates without establishing a "shopping credit" to facilitate customer choice was fatal to the development of its retail markets. In fact, California's effort to transition to competitive markets was doomed when it froze utility customer rates while tying the back-out rate for direct access customers to wholesale prices in the CalPX. Moreover, utilities were left with overwhelming competitive advantages over new market entrants, including their monopoly on default service.

As a result of this flawed market design, no new retail suppliers were positioned to serve San Diego's load last summer when the rate freeze temporarily ended. SDG&E was left as the default supplier with customers having limited access to alternative suppliers and the risk management products they could have provided. Consequently, retail customers were exposed to naturally occurring spot-market price volatility in supply-constrained real-time markets. Under a single default service rate, they are deprived of advance knowledge of their electricity prices and the opportunity to protect themselves from that price risk.

Rather than correcting its flawed market and rate structure, California policymakers reinstated a retail price freeze in San Diego and permitted only a temporary 1¢/KWh rate increase for PG&E and Edison for 90 days. Here again, price caps will have a detrimental effect on the development of the retail market without an adequate shopping credit. Continual retail rate freezes discourage large and small customers from implementing load management programs or securing risk-management products from other energy service providers.

5. Progress and Additional Recommendations

To help achieve a long-term solution, progress has been made to eliminate the CalPX's monopoly. All electricity purchasers (retail or wholesale) are now being allowed and encouraged to use all hedging tools available in the market (including bilateral contracts in forward markets), from any supplier.

Through the creation of a so-called "Green Team," the state is beginning to find creative solutions to existing environmental limitations on new power plant development.

Finally, on the heels of a thorough investigation into allegations of market power abuse in California, the Federal Energy Regulatory Commission (FERC) is continuing to monitor the behavior of market participants.

In addition, EPSA also offers the following suggestions:

- The siting and permitting process for new generation and transmission facilities should continue to be streamlined to meet growing electricity demands.
- Customers and suppliers must be able to see and respond to accurate price signals so as to encourage investment in new generation and allow demand responsiveness.
- Retail markets need to be redesigned to eliminate incumbency advantages and assure market entry, customer choice and service options.
- FERC needs to critically review and carefully consider the congestion management reform/market redesign proposal being developed by the Cal ISO when it is filed.
- If policymakers determine that California's market structure requires the continuation of price caps, the limitations on competitive activity and prices should be based on a rigorous market analysis; further, the termination date for the caps should be tied to a well-defined, achievable target (e.g., sufficient capacity or reserve margins).

¹⁹ CPUC, Supplemental Direct Access Implementation Activities Report, August 15, 2000.

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